

# MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office

VOL. LXXII, No. 4.  
WEEKLY.

BALTIMORE, JULY 26, 1917.

\$4.00 A YEAR.  
SINGLE COPIES, 15 CENTS.

PUBLISHED EVERY THURSDAY BY THE  
MANUFACTURERS RECORD PUBLISHING CO.

RICHARD H. EDMONDS, Pres. VICTOR H. POWER, Treas.  
FRANK GOULD, Vice-Pres. I. S. HELD, Sec'y.

RICHARD H. EDMONDS, Editor and General Manager

## BRANCH OFFICES:

NEW YORK, 52 Broadway CHICAGO, 919 Fisher Bldg.  
BOSTON, 733 Old South Bldg. ST. LOUIS, 608 Century Building

Subscription \$4 a year (payable in advance) to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. To Foreign Countries (Including Canada) in the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as second-class matter.]

In order to avoid delays, all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

## A GREAT AWAKENER.

Tampa, Fla., July 21, 1917.

Editor Manufacturers Record:

Enclosed is check for \$4 to pay for my subscription.

The MANUFACTURERS RECORD is a great awakener, and I consider it the greatest paper published in the United States. On the war, in all its phases, great truths are expressed in each issue, which, if heeded, would save thousands of lives and millions of dollars.

Really, it has for the past few months been worth its weight in gold.

W. D. DAVIS.

## NERO A SAINT AS COMPARED WITH SOME WHO LIVE IN AMERICA.

A TREMENDOUS issue is before us. We have been pleading with the country for many months to realize it. But, with eyes bandaged in order to prevent seeing the truth, with ears stopped in order that they might not hear it, the politicians in Washington have, for the last two years, been wasting the most priceless time in human history, deaf to the call of the world for rescue from barbarism, and blind to the certain destruction of our own country unless, standing with the Allies, we save them from ruin.

Washington has been filled with pro-Germans, the Congress of the nation has listened to the speeches of traitors guilty of treason to a degree which ought to have sent them before the firing squad; the country at large has refused to awaken, and so we have gone on day after day, week after week, month after month and year after year, until now we have reached a point where the danger which confronts us is the greatest in its terrific possibilities ever confronted in the world's history by such a nation.

Nero fiddling while Rome burned was a patriotic saint, worthy of the highest admiration of his own generation and of all the generations that have followed, as compared with many of the men in Washington, whose work has not been merely to fiddle in pleasure, but who have been engaged in throwing on the fuel and lighting the torch with which to burn the nation's life at the stake. And these men are not only the pro-Germans and the traitors whose presence disgraces Congress, but there have been many others whose narrow vision, whose inability to comprehend facts, has made them, sometimes unintentionally, it is true, co-partners with the traitors and with those who have tried to nail the nation to the cross and around it pile the fagots and help to put the torch, that they might around this martyred national life dance with fiendish glee and prepare to welcome Kaiser Wilhelm and his co-workers fresh from Hell.

## Daylight Dawns in the Shipbuilding Program of the Nation.

### TELEGRAM TO PRESIDENT WILSON.

Baltimore, July 24, 1917.

Hon. Woodrow Wilson,  
President of the United States,  
Washington, D. C.:

Permit me to extend my congratulations upon the change in the Shipping Board. The achievements of the new members have been such that I feel the country will be absolutely safe in their hands to the extent that it may be possible to make up for lost time. Priceless time has been lost over the unjustifiable antagonism in the Shipping Board, which prevented the building of ships.

While steel ships may be preferable to wooden ships, we shall need every ship that it is possible to be built by the utmost stretch of the power and energy and money of the country.

Two Southern wooden ships, owned by private capitalists, recently launched, have safely reached Europe and delivered cargoes of lumber and naval stores which were sadly needed, and dozens of other wooden ships are being built in Southern yards for private capitalists. May I, therefore, presume to urge that you lend your influence to induce the new Shipping Board to permit nothing to stand in the way of building, with the utmost speed, every ship, whether of wood or of steel, which can be produced, even without regard to the primary question of cost, for money counts for but little when the life of this nation and of civilization is staked upon the rapidity with which we build ships.

RICHARD H. EDMONDS,  
Editor Manufacturers Record.

### TELEGRAM.

Baltimore, Md., July 24, 1917.

Edward N. Hurley,  
Hotel Willard,  
Washington, D. C.

My heartiest congratulations to the country on the selection of you and your associates for the shipping board. Priceless time has been lost, endangering the life of the nation, but I trust that with the tremendous energy which I know you and your associates will throw into the building of ships mighty achievements can be made. We must build with all possible speed, through the concentrated energy, power and money of the nation, ships of steel and ships of wood.

I have just wired the President congratulating him on the change and reporting that today I am advised of the arrival in Europe of two wooden ships lately launched at Southern yards, which safely delivered important cargoes to one of the Allies.

Richard H. Edmonds,  
Editor Manufacturers Record.

This nation may well take courage and thank God for the change. Mr. Hurley has demonstrated his pre-eminent constructive powers, and President Wilson has rendered the nation a great service in calling him to this gigantic task. With such associates as Capps and Colby the Shipping Board now becomes a reality and not a farce. All civilization is to be congratulated.

## SENATOR LEWIS ON GERMANY'S PEACE TERMS.

THE suggestion of Senator Lewis in the Senate on Monday last, that this country should now undertake to bring about peace with Germany—the statement, as he said, being prompted by telegrams from representative German citizens of Chicago—was a disgrace to the United States Senate and should place Senator Lewis in the category of those who, if not guilty of treason, at least border very close to it.

Villains, having accomplished the task of outraging and murdering a man's family and robbing his home, have gathered together the booty and are willing to accept peace, provided they are not punished for their crime, nor their booty taken from them. That is the exact position of Germany. It is the position on which Germany has always been willing to make terms since the day when it discovered that it could not completely overrun the world, and these have always been the terms on which murderers, rapists and thieves are willing to have peace.

The man in this country who gives serious consideration to compromising with such unspeakable crimes as Germany has been guilty of is an enemy to his country, an enemy to every woman in it, and an enemy to civilization, and Senator Lewis has made a record in this respect, upon which, in the years to come, he and every descendant that he may have should look with such shame as to make them bow their heads in the presence of decent men.

Senator Lewis dared to suggest in the Senate this thought of peace, and added to it the following:

"It is my opinion that the House of Hohenzollern would rather have peace upon the terms of the Allies

and retain power than to have a peace which would put it out of power and be succeeded by another power."

Therefore, Senator Lewis would have this nation become a party to condoning, through peace dealings with the House of Hohenzollern, the most fearful crimes that ever blackened human history. May God save this nation from a moral degradation so great that its people would be willing to grant to Kaiser Wilhelm and his family of murderers any terms which would permit them to continue their accursed reign!

Shall we now have to rank Senator Lewis with the La Follettes and the Hardwicks and the Stones and others whose presence in the Senate chamber stains the halls of what should be the greatest legislative body on earth, free from the contaminating touch of those whose presence is a pollution?

## BIG IRON AND STEEL PLANT ON PACIFIC COAST.

PACIFIC COAST capitalists have organized a \$20,000,000 company for building a large iron and steel plant, including furnaces and steel mills for making structural shapes and ship plates. The plant is to be erected near Seattle, and some of the leading capitalists of the Pacific Coast are reported as identified with it.

The MANUFACTURERS RECORD is glad to see the continued development of the iron and steel interests of the country, and commends the Pacific Coast people in the building of this plant for the enlargement of the output of steel for their country.

## WILL THE NATION SELL ITS SOUL TO THE LIQUOR TRAFFIC?

THE liquor interests of the country have distributed post cards in hotels and other places, to be picked up by guests or anyone else interested, to enable them easily to send a printed protest against prohibition to Congressmen. One of the statements on this postal card says:

Any drastic prohibition legislation will surely result in disaster to the distilling, brewing and wine industries, bringing on an industrial panic, creating unrest and causing great financial loss and possible ruin to many individuals and corporations, which will seriously interfere with the plans of the Government in the present emergency.

The MANUFACTURERS RECORD would like to submit in opposition the following:

Prohibition legislation, drastic as it could be made, would save billions of dollars now wasted in the curse of drink, and an equal amount, or very nearly as much, in the maintenance of forces of civilization in the shape of policemen, jails, penitentiaries, poorhouses, and other things for which whisky is, to a large extent, responsible.

Drastic prohibition, instead of producing an industrial panic, would save millions of bushels of grain needed to feed a world threatened with starvation.

Drastic prohibition would take out of politics the fearful curse of the political henchman and the power of the saloon and the fearful power of immorality due to the saloon and the liquor traffic.

Drastic prohibition would take the Government out of partnership with the vilest traffic that ever cursed mankind and save the nation from being a co-partner with this traffic in destroying lives and souls.

Drastic prohibition would prevent the national Government from putting to the lips of the soldiers whom it is calling to the colors the bottle of poison which takes away the power of the brain and the soul and makes besotted men out of men created in the image of God.

Drastic prohibition would be worth an almost infinite amount to the nation, financially, industrially and morally.

Drastic prohibition would increase the efficiency of the army. It would increase the efficiency of the workers in industrial plants and in mining operations. It would increase the efficiency of the men on the farms and add enormously to the potential power of the nation.

These are some of the things which drastic prohibition would effect, and though the liquor interests, allied in many of their activities with the most despicable of the pro-German interests of the country, are using the utmost power of their political work and of their influence on financial institutions and on business people generally to continue this accursed traffic, the nation cannot afford to sell its soul to the whisky traffic.

When the liquor traffic holds before the nation as a bribe the income received from taxes paid by it, it should be spurned with the contempt of every decent, honest citizen.

Has America sunk so low, has it so little regard for the moral welfare of its people in the army and out of the army, that it is willing to barter the souls of its people for the few hundreds of millions of dollars put by this accursed traffic into the national treasury?

Will the nation stamp upon its history its willingness to license immorality in order to secure revenue?

Will the nation permit the vilest influences of the lowest and most degraded character of people, whose activities lead straight to hell, to have sufficient power to shape national legislation through the liquor traffic?

The country is crying for labor in productive work. It needs every dollar of capital and every plant for producing the things that are needed for the maintenance of the life of the nation and for carrying the war to a success. Will the nation be bulldozed or bribed by the liquor interests on the ground that to close this traffic would throw men out of employment and create financial loss? In-

stead of continuing in an employment which is a curse to humanity, these men could find employment in producing things needed for the nation's life, and the plants which are now used for producing death could be made to produce things that will help to sustain the life of the country.

Shall the nation, in such a crisis as this, hesitate to put into effect the most drastic prohibition when to fail to do so means to condemn tens of thousands, and perchance hundreds of thousands, of our soldiers to ruin, moral and physical, and to lessen our efficiency in the war through the curse of drink and all the evils that are connected therewith?

Is the nation lacking in backbone, or is it ready to submit to the dictates of the liquor traffic and its co-partners in evil?

## COTTON MANUFACTURING'S HEAVIEST INCREASE IN SOUTH.

COTTON consumed for the month of June, 1917, according to the Census Bureau's figures, amounted to 575,122 bales, 328,974 bales of which were consumed in the mills of the South, against 316,106 bales consumed in the South in June, 1916, and 570,597 bales consumed in the whole country in June of last year.

For the eleven months ending June 30, 1917, 6,259,692 bales were consumed in the whole country, compared with 5,908,085 bales, a gain of 351,607 bales over the corresponding period of 1916. The South's share of this consumption was 3,591,022 bales in the eleven months of the cotton year 1917, compared with 3,251,392 bales for the eleven months of 1916, an increase of 251,392 bales, which is nearly the total gain made by the mills of the whole country.

Exports of domestic cotton and linters during the eleven months ending June 30, 1917, reached 5,467,658 bales, which was less by 243,699 bales than the 5,711,357 bales exported during the same period of 1916.

On June 30, 1917, the number of bales of cotton in consuming establishments and in public storage and at compresses was 3,156,559 bales, compared with 3,355,459 bales same time last year, or 198,900 bales less in the reserve supply of the country. Cotton imports for the eleven months dropped from 429,938 bales in 1916 to 281,520 bales in 1917.

The whole country had 33,463,946 active cotton spindles in June, 1917, compared with 32,261,694 spindles in June, 1916. Of this number, the South reported 14,011,432 spindles active in June of this year, compared with 13,245,516 for June of last year.

## DON'T TRUST GERMANY'S FASLEHOODS.

LAST week we warned our readers against placing any reliance in the statements sent out from Germany, which, to a large extent, are designed to throw us off our guard, and urged that this country should not be deceived by these rumors or the reports of Germany's peace moves, all of which are for the express purpose of causing us to delay preparations for real war.

In a letter from a leading business man from the Pacific Coast the same thought is expressed. In writing of the situation he says:

It is too early to judge what is actually happening in Germany's internal affairs, but it is well to recall that we had been warned that just such news would be sent out in order to slow up preparations for war by spreading the idea that Germany was on the brink of collapse.

The MANUFACTURERS RECORD has no faith whatever in any idea that Germany is near a collapse from starvation, from lack of men or lack of munitions. We believe Germany is abundantly able to carry on this war for a year or two, and we believe that, as a minimum, it will last two years unless we can throw a tremendously greater force into the contest than there is any indication of now. Moreover, Germany is making such tremendous headway in sinking ships that the future is dark unless we move with tremendous power not now in evidence.

## NOTWITHSTANDING THE WAR SITUATION, NORTH CAROLINA DOES NOT PROPOSE TO ABANDON ROAD BUILDING.

MR. W. S. FALLIS, State Highway Engineer, writing from Raleigh to the MANUFACTURERS RECORD, says:

The road work in the State is being very seriously affected by present conditions caused by labor and war. High prices are interfering considerably with the progress of our work, but still a great deal of work is being done and being proposed. We are not going to quit entirely on account of this, and if matters get so we can secure the labor and money within reason we do not expect any material decrease in work during the year.

We can fully understand the difficulties under which highway construction must be prosecuted, but all other business interests are laboring under the same disadvantage. The steel men are struggling to get labor and material for steel production; the shipbuilders are scouring the country for men to work in shipyards; the Government is struggling to get even enough clerks to do clerical work connected with the war. So, running through every line of activity, there is a scarcity of labor, and prices are high and materials difficult to secure. Nevertheless, we cannot stop construction activities of the things which make for national safety and for the utilization of the resources of the country.

Road building pre-eminently comes under this heading. We must go ahead on the building of roads, on new sewerage and water-works, wherever needed, and the very demand for the machinery and equipment required for work of this kind should stimulate its production.

Men must work a little longer every day; the thought of an eight-hour day as the limit of work must be abandoned, and in the shop, in the factory, on the road, in the counting-room, in the lawyer's office, and everywhere else, men and women must realize that they can add to the potential power of the nation by a few hours' extra work every day.

No man, realizing the burden of responsibility upon this country or upon him individually, can think of shutting off his hours of labor merely for his own comfort or convenience. To do so would be to be a shirker, and today every man and woman must be willing to throw into production activities a little more energy and a little more strength, and thus in the aggregate create an enormous increase in the nation's potentialities.

These things must be done in the building of highways, in farming operations, in iron and steel works, in coal mining, for in every line of human endeavor, from the preaching of the Gospel to the most menial labor that men do, the call is for work. Never in human history was the call so insistent and the consequences connected therewith so momentous.

We are glad that North Carolina does not propose to give up on highway construction. There is no reason to believe, so far as we can see, that there will be any large decrease in the cost of materials or in the rate of wages for some years to come. In times past high cost of materials has continued for five or six years or more after the close of great wars. At the close of this war the situation will probably be, in this respect, intensified, and as yet no human foresight can enable us to see how long the war will last. We have no faith in any early peace unless that peace were dictated by Germany to the Allies and to the United States; on no other basis, so far as we can see, can peace come for at least a year or two.

## WILL ASSISTANT SECRETARY OF AGRICULTURE VROOMAN PLEASE NOTICE?

GEORGIA has shipped over 4000 carloads of peaches, mainly to help feed the North and West. Now, of course, this is an outrage. These peach orchards should be growing corn instead of sending fruit to the West, but we have not noticed that Mr. Vrooman shut off the car supply to keep the West and North from getting this fruit.



## Two Southern-Built Ships Deliver Their Cargoes in Europe and Prove the Value of Wooden Ships in Saving the Allies.

[Special Dispatch to Manufacturers Record.]

Brunswick, Ga., July 23.

The three-masted schooner Glynn, the first ocean-going commerce carrier built in Georgia since the Civil War, and so far as known here the first launched from a Southern shipyard since the revival of wooden shipbuilding in America, and the first Southern built vessel to take a cargo from an American port for Europe since the war began, has arrived safely at her port of destination in Europe, according to a cablegram from her master received by her owners in Brunswick. Though the owners, in accordance with the policy of silence regarding such feats, especially enjoined during the war by the Navy Department, refuse to confirm the report that has been published by Brunswick newspapers, and thereafter extensively republished that the Glynn sank a submarine in combat in the war zone, there seems to be no question of the correctness of the published statement that the Glynn has added to fame by becoming the first Southern built vessel to sink a submarine in combat.

The Glynn was built by the Brunswick Shipbuilding Co., the first shipbuilding company organized for operations in a South Atlantic port. The company was promoted and organized almost entirely with Brunswick capital by Captain John H. Leo, who supervised the construction of the Glynn and who was for many years well known as a sailor of fast schooners in the coastwise trade, and who had previously built several vessels in Eastern shipyards. The keel was laid in March, 1916, and the vessel launched January 12, 1917. After being rigged and equipped she was loaded with 5000 barrels of rosin produced in a Brunswick plant and took cargo from a dock adjoining the ways where she was built. On April 1 she sailed for Europe amid the cheers of thousands of people who love her as the pioneer that started the building of ships extensively in Brunswick, where there are now three large plants in operation and a fourth mammoth plant in course of construction. The news of her safe arrival after the dangerous voyage through the war zone has brought joy to everyone in Brunswick, as well as the friends and relatives of her Brunswick crew.

ALBERT M. SMITH,  
Secretary Board of Trade.

Henry Piaggio, a ship builder and ship owner, having several shipyards on the Gulf coast, wires the MANUFACTURERS RECORD:

The schooner City of Orange, the first all pitch-pine boat built at Orange, Tex., for me, arrived at Gibraltar, June 22, and Genoa, July 7.

Thus two Southern ports have already sent wooden ships across the ocean to help the Allies in their struggle, and many other wooden ships are under construction at Brunswick, Savannah, at Wilmington, at Baltimore and at many Gulf ports, and new shipyards are being established in the North as well as in the South by some of the strongest concerns in the United States to build wooden ships.

The Foundation Company of New York, one of the greatest construction companies of the country, recently made a contract for the construction of wooden ships, expecting to launch a wooden ship every ten days. The company has actually beaten this record, so it is reported. The New York Journal of Commerce of last Saturday stated that this company had contracted with the French Government to build forty wooden ships of 3000 tons each, with the privilege on the part of the French Government of increasing the number to 120.

Owing to the desire of the Washington authorities that no information shall be made public as to

these contracts, an official confirmation of the reported French contract is not available, but the statement is doubtless correct. Despite these facts, showing that the wooden ship can be built rapidly, and despite the fact that there is an abundance of timber available and that the many yards now in operation are increasing their facilities for building and many new yards are being established, we still have a few supposedly prominent men berating the building of wooden ships by the Government. Every influence which these men can exert to misrepresent the situation is being put into effect. Eastern newspapers are being filled with adverse reports in regard to the possibility of building wooden ships to assist in this world crisis.

Every man who flies so directly in the face of facts and seeks to lessen the building of wooden ships is directly contributing to the possibility of our own defeat, whether he be doing so innocently or not.

We give to General Goethals and those co-operating with him for the defeat of the wooden shipbuilding program the credit for honest conviction, but we cannot give them any credit whatever for intelligence or judgment in the matter.

As emphasizing the acute situation in the way of the need of ships, it may be worth while to publish a statement which has just been issued through Mr. R. B. Price, vice-president of the United States Rubber Co., one of the great industrial concerns of America, sent out by the executives of the National Committee of Patriotic and Defense Societies, the Patriotic Educational Society and the Conference Committee on National Preparedness. In an emergency meeting these organizations make the following appeal to patriotic Americans, that we may see the situation exactly as it is, and the MANUFACTURERS RECORD, which has been leading in this fight, knows that many of the statements in this appeal are absolutely correct. It is as follows:

### America Is Not Winning the War.

Talk and indecision reign supreme in Washington.

Your blood, the lives of your families and friends will be the forfeit.

Our chiefs are not strengthening the weakest links of our chain of offense and defense. Bickering and delays are tolerated.

Americans, awake! Demand facts—not the optimistic imaginings with which officials fill our press.

Why have an army if it cannot be shipped to meet the foe? What good to send an army of conquering size to hostile fields if we have no ships to maintain it and supply the necessary millions of tons of munitions?

What benefit to economize on food or increase food production if ships to maintain our soldiers and feed our famished allies are not simultaneously available?

Why should we tolerate personal squabbles in high places if ships are not being built?

Why should we accept anybody's program for shipbuilding when it does not include every ship that can be built in minimum time capable of crossing the ocean and enduring at least a year?

We are failing in our part against the submarine despite our Navy Department optimists.

Some valuable ideas proven effective abroad are scorned by our Navy Department, but the censorship protects the delinquents. Why should we be content with 110-foot submarine chasers when experts who know the North Sea say that 200-foot craft are the limit for sea service?

And yet the more destructive the submarine the greater need for submarine destroyers.

This war will be lost, or victory delayed at frightful cost:

1. For lack of business management in high places.
2. For want of ships to enable American men, supplies and food to support our allies and hammer out enemies.

Be not misled—we are not getting the ships. Nobody has yet totaled the vast tonnage needed for carrying out present plans.

No program yet presented includes all the ships that could be built.

Responsible parties offering to put up bonds and build hundreds of ships in record time were "turned down" over three months ago and are still "turned down."

Is the American public, which pays the bills and furnishes the blood of loved ones to atone for the mistakes of Washington, going to endure these conditions in silence?

If eight months from now lack of ships and foresight and arithmetic prove our undoing, who will be to blame? Let it not be you!

The nation has been tolerant. We have voted money and conscription—but that cannot win the war.

Submarines work day and night and their victories are not all totaled in official reports. Those reports are intended to deceive the enemy, but they fool you most. Do you dare gamble with your country's safety by not enforcing the strengthening of our weakest link?

Members of our patriotic and defense societies, make your local newspapers give you the real truth, the whole truth, untinged with July 4 complacency. They know more than they dare print, but are throttled by the invisible censorship controlled in Washington. Stir up your people in Congress to pass food, export control enemy spy and other uncompleted legislation, and above all have them make our executives build ships, every possible ship immediately. Nothing less will win the war. Italy, Russia, France are staggering for want of coal or other things carried in ships. Will you let them fall and bring the fight to your own shores?

### Your Action May Decide.

Get every club and society in your locality to act as organizations and individuals. Demand an accounting of your national servants who hold the reins. Have you not the right to know whether they are driving to victory or defeat?

### Speak Out Today.

Submarines already in six months this year have destroyed more tonnage than the world has even planned to build in twelve months.

Must foresight and constructive intelligence be limited to the Germans?

Can democracy learn only through disaster?

If so, woe betide democracy and its men, women and children.

## BUSINESS ACTIVITY IN THE SOUTH.

STATEMENTS issued by several important railroads in the South, including the Southern Railway, Atlantic Coast Line, Seaboard Air Line and Louisville & Nashville Railroad, and covering the period from January 1 to May 31, five months, display increases in their total operating revenues, respectively, of from 13 per cent. in the case of the Southern to considerably more than 15 per cent. in the case of the Coast Line, as compared with the same period of last year. The increase on the Louisville & Nashville was 14 per cent., and on the Seaboard Air Line 14½ per cent.

This is an excellent showing, indicative of the general business activity throughout a large part of the South, and promises most encouragingly for the remainder of 1917.

## A RUSSIAN JEW'S NOTE OF PATRIOTISM.

Boston, July 23.

Editor Manufacturers Record:

I came across a little incident today. It will appeal to you, I feel certain. I have patronized a Jewish newsboy for several years, one I remember as having started business on one of our street corners ten or twelve years ago. Saturday night he told me:

"You will buy of my brother now. I have enlisted in the army."

When I came to ask him the reasons, this was the answer:

"I came here from Russia ten years ago, and I have had from this country everything a boy could have given him to help him get the education he wanted. I shall give this country my services for so long a time as I am wanted, and then not half return what I am indebted to the United States for."

How is this for a foreigner?

S. I. C.

God bless this Russian Jew who has voiced the thought of many a foreigner who has found this country the Promised Land and who has realized that great opportunities bring great responsibilities.

## PATRIOTIC BUSINESS MEN VICIOUSLY ASSAILED BY A WASHINGTON UNDERLING.

CARL VROOMAN, Assistant Secretary of Agriculture, feels called upon every now and then to break loose, and like a volcano which breaks loose, much of the stuff that is erupted is of as much value as the lava which, belching forth from subterranean depths, spreads destruction and ruin.

Having misrepresented the South to the extreme, having said that this section should not be permitted to use cars with which to bring foodstuffs from the West, and therefore threatened it with starvation unless it followed his outline of instructions, Mr. Vrooman again breaks forth at this time with just as much sense as his threat against the South. On Wednesday he issued an appeal to the business world. But why Mr. Vrooman should take himself with sufficient seriousness to feel that the business world needs an appeal from him no one has yet been able to learn, for the world does not and cannot take him as seriously as he does himself. Indeed, there has to be some merit in an individual holding a responsible Government position before the world will accept him at the valuation that he sometimes puts himself. In this new eruption, as quoted in a dispatch from Washington, Mr. Vrooman said:

Never before have the business men of a nation shown as much patriotism as they have shown in the United States during the last three months. Unfortunately, however, there have been exceptions to this rule. Only recently we have seen the Secretary of the Navy and the chairman of the Shipping Board forced into the arena in a hand-to-hand struggle with an organization of unpatriotic, selfish, sodden steel magnates.

If an army of civilian patriots be not organized to stand behind the President and fight this great fight for business honor, while our boys in khaki are fighting and dying triumphantly in the trenches, the country will be disgraced at home by a despicable scramble for illegitimate war profits on steel and coal, on munitions and food.

By reason of his reference to "unpatriotic, selfish, sodden steel magnates" Mr. Vrooman has demonstrated that decent respect for the opinions of mankind would suggest to the administration the elimination of Mr. Vrooman from public life. The steel men whom he thus so bitterly scores have far more patriotism because they have more capacity for it than Mr. Vrooman and they are just as intensely interested in this country as is Mr. Vrooman.

What mighty man is he that he should undertake thus to criticize men who through their whole careers have shown the highest degree of patriotism and unselfishly and patriotically are co-operating to the uttermost extent with the administration?

If it were possible for such a volcanic eruption to take place in Washington as to throw out of office all of the men of the Vrooman stamp and replace them with the great leaders in the steel industry or men of equal standing in other industries, there would be more hope for the country winning this war without undue loss of life and money.

In the leaders in the steel, lumber and coal industries, in the great financiers, and in other business men of the country who have led this nation in its vast industrial development, there is more of mental capacity than is found in most of the departments in Washington a thousand to one. As compared with Mr. Vrooman, whose undignified and indecent denunciation of the steel men puts him entirely out of the category of men fit to be leaders, comparisons would not only be odorous, but odious.

If President Wilson can divorce himself and the whole Government situation from the men of the Vrooman stripe, the men who are constantly trying

to pose as though they were doing something by denouncing others, the men who have neither the mental capacity nor the patriotism to measure alongside of the great constructive leaders in American industry and finance, he would be rendering the world a service.

President Wilson is bearing too great a burden. It is impossible for him to carry it without collapsing. He has not around him men strong enough to carry the burden for him, for the strong men who have been brought to his help are in advisory capacities and not in executive work. Their abilities as compared with those of many of the men in office life in Washington rank as that of the executive head of a great corporation to the office boy. The office boy is good in his place; he is a necessity, and some day he may, perchance, be the head of the organization, but for the time being it would be out of place for the organization to make the executive head subservient to the office boy's directions, but to a large extent this is the condition of affairs in Washington.

This war cannot be won except through the closest co-operation and guiding power of the great business leaders of the country. There is not enough business ability in the politicians in Washington to win it. War is the most highly specialized business in the world, and it requires the highest executive business talent entirely distinct from the purely political talents of politicians or even of statesmen without business and technical training.

## NORTH CAROLINA FARMERS DEMANDING WAR TAX ON DOGS.

THE fight of the MANUFACTURERS RECORD to increase the number of sheep in the South by decreasing the number of worthless dogs through a war tax on dogs, which would bring a large income to the Government and discourage the raising of worthless dogs to roam the country and destroy sheep, is bearing fruit. From every direction word comes that the people of the South and West are becoming aroused to the importance of the subject.

Mr. N. Buckner, secretary of the Asheville Board of Trade, an organization which has taken an active part in this campaign, in a letter to the MANUFACTURERS RECORD says:

Be glad to advise you that the State Council of the Farmers' Union, composed of Dr. H. Q. Alexander, Dr. Clarence Poe and others, unanimously passed the following resolution and telegraphed same to State Senators and Representatives:

"The State Council of North Carolina Farmers' Union, in session at the Grove Park Inn, Asheville, urge our Representatives and Senators to place a war tax on dogs, which will add needed funds to the war budget, reduce the number of worthless dogs, conserve our food supply and quickly increase the much-needed supply of meat and clothing through the encouragement of the sheep-raising industry, to which a large part of North Carolina is particularly well adapted."

This particular resolution was passed at the request of the secretary of the Asheville Board of Trade, who read the following resolution unanimously endorsed by the Commercial Secretaries' Association, which met at High Point a short time ago:

"The secretaries of the commercial bodies of North Carolina urge Congress to place a war tax on dogs, which will add needed funds to the war budget, reduce the number of worthless dogs, and will primarily enormously encourage the sheep-raising industry in North Carolina and other States, quickly establishing an increased meat supply and a wool supply now badly needed by the United States and her allies."

On June 29 the Asheville Board of Trade sent telegrams to a large number of chambers of commerce and boards of trade throughout the country, with copies to our Representatives and Senators, asking them to do everything possible toward securing war tax on dogs, with a view of eliminating the worthless dog and increasing the sheep-raising industry.

I am enclosing herewith a story from the Asheville Citizen of the 19th, which will no doubt be of interest to you, commenting on your editorial in the MANUFACTURERS RECORD of July 12.

## A BIG SHIPYARD BY THE UNITED STATES STEEL CORPORATION.

JUDGE GARY, Chairman of the United States Steel Corporation, wires the MANUFACTURERS RECORD that the new steel yard which his company is preparing to construct will put in 12 shipways, and that it is hoped that they can commence building ships in about six months. The initial appropriation for the establishment of the yard, he says, is \$6,000,000.

No corporation in America has a greater capacity for rapidity of construction than the Steel Corporation. When, therefore, it is announced that this company hopes to begin the actual building of ships in about six months we can gain some idea as to the problem which confronts the country in the prompt construction of a sufficient number of steel ships to even measurably meet the world's requirements.

The country is to be congratulated that the Steel Corporation has made this move. We trust that it will duplicate this enterprise by establishing a similar yard in the South. It is also to be hoped that others of the great steel companies of the country will follow the example of the Steel Corporation and establish big shipyards. This is not a time for these steel companies to hold back upon what might be called in other times reckless expenditures in order to rush construction work. This is the time when there is so much at stake that the utmost exertion of men, backed by limitless money, must be thrown into the establishment of shipyards and the building of ships, even if it were believed that a few years hence these yards would be without value. On the contrary, however, these yards are likely to increase in value for years to come, if we can meet Germany's war upon us and defeat her attempts to dominate the world—and this can only be accomplished by the building of ships, and more ships, and still more ships.

The terrific destruction of shipping and the deterioration which is going on in the ships in use will mean the practical exhaustion of the entire supply of ships now in existence throughout the world. To all intents and purposes the entire ocean-going shipping of the world must be replaced by new ships, for submarine sinking and deterioration will rapidly exhaust the world's present ships. Shipyards must, therefore, be a dominant power in the business life of this country for years to come.

The yard to be established by the Steel Corporation will be constructed by a subsidiary to be known as the Federal Shipbuilding Co., with a capital of \$3,000,000, on Newark Bay, where about 148 acres of land have been secured. It is understood that material for these ships will be fabricated by the American Bridge Co., one of the leading subsidiaries of the Steel Corporation, and that about 5000 men will be employed at the start.

## WHEN THE COTTON PICKER WILL COME

"WITH all due respect to the argument as to why cotton is not picked by machinery, it may be said, in all seriousness, that the South will have a mechanical cotton-picker when it really wants it, and not before."—Financial America.

Financial America is wrong. The South wants a cotton picker, and wants it badly, and it has taken every opportunity to test out cotton pickers. But no cotton picker yet put on the market during the last twenty-five years has been a commercial success. Dozens of them have been able to pick cotton, but when put to the final test of operating in the field they have not proved a commercial proposition.

The MANUFACTURERS RECORD has been vigorously publishing facts about cotton pickers for the last twenty-five years or more, hoping that every new one put on the market might prove the real thing, but none of them have yet met the actual requirements needed in the cotton picker. In theory they were good, but their own inventors have been unable to make a commercial success of them when tested in the cotton field. Some of them may yet succeed and thus bless the South and the nation.



## The South Is Not a Slacker in Food Production.

**T**HOUGH charged with being a slacker in the production of foodstuffs, the South, as a matter of fact, has been a volunteer in the production of food, and did not need to be drafted into service.

Of all sections of the country, the South is the most misunderstood and misrepresented. An erroneous statement once put forth about this section seems to travel forever, while the truth never catches up.

For years the MANUFACTURERS RECORD has been urging the South to increase its food production, not because it was falling down in this line as badly as many people have claimed, but because there is a great opportunity for the South to add to its wealth by completely feeding itself while helping to feed and clothe the nation. Its peculiar agricultural advantages give it a permanent opportunity for running far ahead of any other section in a combination of cotton and grain and fruits and vegetables.

The South has, in round figures, about one-third of the population of the country; but in 1916 the South produced 36 per cent. of the entire corn crop of the United States, 92 per cent. of its rice, an especially important foodstuff; 92 per cent. of its sweet potatoes, one of the best foods which the country produces; 30 per cent. of its apple crop, 49 per cent. of the total crop of peaches, and on January 1 of this year it had 29 per cent. of the milch cows in the country, 35 per cent. of the total number of cattle and 39 per cent. of the total of swine.

Those who have been so vigorously denouncing the South for not producing grain and meats will doubtless be somewhat staggered to find that this section, with only one-third of the nation's population, has 39 per cent. of its hogs and 35 per cent. of its cattle, and that it raised last year 1,293,443,000 bushels of grain, including rice. To this it added 52,700,000 bushels of white potatoes and 65,200,000 bushels of sweet potatoes, a total of 117,900,000 bushels of potatoes out of a total for the United States of 366,000,000 bushels, or nearly one-third of the potato crop of the country.

The South produced 60,852,000 bushels of apples out of a total of 202,245,000 bushels for the United States, and largely supplied other sections with this splendid fruit.

Its peach production, very largely shipped to other sections and found throughout the North and West, amounted to 17,973,000 bushels, or 49 per cent. of the total yield for the country.

Of swine, the South had 26,579,000 out of a total of 67,453,000, and it had 14,606,000 head of cattle out of a total for the country of 40,849,000.

Moreover, the South produced the entire sugarcane crop of the country, or 625,500,000 pounds of cane sugar. This was 25 per cent. of the total sugar, including beet, of the United States, and to this should be added the entire molasses production of the country.

No figures are available as to the production of butter since the Census of 1909, but in that year the South produced 26 per cent. of the entire output of the country. It also had in that year 45 per cent. of the production of chickens and other fowls, and 33 per cent. of the output of eggs, the egg production of that year in the South being 538,000,000 dozen out of a total of 1,591,000,000 dozen in the entire country.

Of peanuts, a product which is becoming more and more important not only for the uses to which peanuts were formerly put, but for the oil now pressed from them, the South produced 90 per cent. last year, or a total of 44,600,000 bushels, leaving only 380,000 bushels for the rest of the country.

No figures are yet obtainable as to the production of soy beans, but the extent of the output as indicated by the fact that one Baltimore packing-house alone—and there are a number of them in this city and in other places handling soy beans—last year canned 40,000 cases.

The output of cottonseed oil, one of the most essential fats available in this country, amounts, in round figures, to about 1,400,000,000 pounds per year, or almost as much as the total production of butter on the farms and in the creameries of the whole

country. It has been estimated by competent authorities that the intrinsic value of cottonseed products for food for man and beast reaches \$350,000,000 a year.

Notwithstanding these figures, which could at all times have been open to the study of the United States Department of Agriculture and to other authorities, the South has been berated and held up to public scorn as though it was a culprit, a slacker, failing to do its duty, and it has been threatened with starvation on the basis that the Government would not permit the use of cars to bring food from the West to the South, ignoring entirely the enormous shipments of foodstuffs from the South to the West and North.

The total shipments of truck, such as early vegetables of every variety, fruits, oysters and fish, from the South to feed the North and West, and without which there would indeed be starvation prices in the cities of those sections, amounts to over \$200,000,000 a year.

The cottonseed-oil products of this section are also largely shipped to the North and West, and without them there would be a famine of fats throughout the country. To the great output of cottonseed oil is now being added a large quantity of soy-bean oil and peanut oil, both of which are rapidly coming into the market to help to supply the need of fats. The food value of one dollar's worth of soy beans is reported to be equal to six dollars' worth of beef. And a letter in last week's issue from one of the large cotton-oil mills of Texas which has for years been producing cottonseed flour reiterates the statement previously published by us that the nutriment in cottonseed flour is many times as great as that in wheat flour.

It is not possible to obtain from the report of the United States Department of Agriculture the value of all of the leading crops of the South, nor the value of such crops as peanuts, soy beans and many other things which greatly swell the total food production of this section. But taking only a few leading crops—corn, wheat, oats, barley, rye, buckwheat, rice, white and sweet potatoes, apples and peaches—the value last year in the South aggregated \$1,495,455,000, against \$3,454,189,000 for the rest of the country. These things, which comprise the main crops of the country outside of the South, but which form only a part of the South's staple production, show that the South is doing wonderfully well, and that the value of the output of these staples was at least 30 per cent. of the total value produced in the country; but to these figures should be added the South's great cotton crop, its fundamental staple, which is to this section what wheat and corn are to the West—the main reliance of agriculture, with an average value now running largely over a billion dollars a year. To these figures also should be added the many millions of dollars for cottonseed products, for peanuts, for soy beans, for fruit and vegetables and the wide variety of things which the South furnishes to the markets of the East and West.

In the light of these facts, it is about time for the country, and especially the Government officials, to cease to berate this section and hold it up to public scorn as though it was achieving nothing except the raising of cotton. Great as is the cotton crop, with its more than a billion dollars of annual value, it is scarcely one-third the total value of all the farm products of the South.

Of necessity some sections must concentrate on vegetables, some on fruits, some on cotton, some on tobacco, some on wheat and some on corn. But it would be as foolish to denounce the West for buying early vegetables from the South or cottonseed oil from this section as it is to denounce the South for buying any corn or provisions from the West.

It is true that the South can increase its diversified agriculture, and it should do so as rapidly as this can be done with its limited help without lessening its attention to cotton production. Indeed, the South could give up cotton production at a less cost to this section than to any other part of the country or to the world. For the South could concentrate on other things and make a living, while

the rest of the country would be shaken to the foundation of its financial structure if there were no cotton crop produced by the South.

It is proper that every business man in the South should urge Southern farmers to increase their food supply and thus make cotton largely a surplus crop, because when this has been achieved the wealth which will come to this section from agriculture will far exceed the wealth ever produced elsewhere by agriculture. It is a combination of the South's ability to raise cotton and to raise foodstuffs alike, which gives it an agricultural position not equaled elsewhere in this or any other land, and when we utilize this combination to the best advantage possible the agricultural wealth of the richest States of the West will seem insignificant compared with the agricultural wealth of the South. Moreover, the South must come to the world's help to save millions of people from starvation. It must produce foodstuffs to a greater extent than ever before, not to save itself from being berated by the Department of Agriculture, but because it has the power to rise above such criticisms and help the world in this the hour of greatest starvation danger the world has ever faced.

### WHAT THE CONTINENTAL CONGRESS THOUGHT OF PROHIBITION.

**R**ESOLVED, "That it be recommended to the several Legislatures of the United States, immediately to pass laws the most effectual for putting an immediate stop to the pernicious practice of distilling grain, by which the most extensive evils are likely to be derived, if not quickly prevented."

The foregoing resolution was quoted by Hon. Henry L. Myers in the United States Senate on July 19 as having been adopted by the Continental Congress, February 27, 1777, and with that as his text Senator Myers pleaded with the Senate to throw off the curse of the whiskey traffic and to follow the doctrine so clearly enunciated in 1777 in the Continental Congress.

In further discussion of the subject he quoted from an address made by Abraham Lincoln, who in 1842 said:

Turn now to the temperance revolution. In it we shall find a stronger bondage broken, a viler slavery unmanumitted, a greater tyrant deposed; in it more of want supplied, more of disease healed, more sorrow assuaged. By it no orphans starving, no widows weeping. By it none wounded in feeling, none injured in interest; even the dram-maker and dram-seller will have glided into other occupations and stand ready to join all others in the universal song of gladness. And what a noble ally this to the cause of political freedom; with such an aid its march cannot fail to be on and on, till every son of earth shall drink in rich fruition the sorrow-quenching draughts of perfect liberty.

And when the victory shall be complete—when there shall be neither a slave nor a drunkard on the earth—how proud the title of that land which may truly claim to be the birthplace and the cradle of both these revolutions that shall have ended in victory. How nobly distinguished that people who shall have planted and nurtured to maturity both the political and moral freedom of their species.

### A SOUTHERN SHORTCOMING.

**T**HE MANUFACTURERS RECORD has a letter from a Southern man living in New York, in which the disposition of the many people of the South not to answer letters promptly is vigorously scored. This failing on the part of many people is seriously injuring the South. Many enemies have been made by the way in which men have ignored their correspondence. We have heard that one of the greatest ministers in the South has estranged many of his admirers because of his indolent habits as a letter-writer, and we have learned by experience that there seems to be a disposition among a great many people in the South to avoid answering a letter if they can possibly do so, even when the letter is of importance. People of the South should change this habit and recognize the importance of giving prompt attention to all correspondence.

## THEY CANNOT WASH FROM THEIR HANDS THE STAIN OF BLOOD GUILTINESS.

**A**MONG the great financial papers of the world the Statist of London easily ranks among the leaders. What it says, therefore, always carries weight.

In discussing the recent report in Parliament as to the failure of the Mesopotamia campaign, the Statist says:

The real fault was committed long before the expedition to Bagdad was planned. Germany for two or three generations had been preparing, at enormous cost, for war. And however people might mistake her objects during the last century, at all events when the first bill was introduced into the Reichstag for the building of a great fleet that would make the possessors of the greatest navy in the world think twice before they quarreled with Germany, it was made perfectly clear beyond all possibility of doubt who was aimed at. Therefore, at all events, while Mr. Balfour's Cabinet was in existence preparations ought to have been made against a danger which was so openly threatened. And the preparations ought to have been continued by Mr. Asquith's Cabinet. There can be no getting over the plain fact that we had full warning of what was intended; that it was our clear duty to guard ourselves against it, and that, therefore, in India as well as at home, the necessary preparations ought to have been made. The whole of the members of the Front Benches upon either side in the House of Commons and the whole of the Lords were guilty quite as much as Lord Hardinge and his colleagues.

But the Statist does not stop there. It says:

The House of Commons was equally guilty and the whole population was responsible, for we all refused to do our duty, though we had full information from the enemy himself of what he intended to do, and the public, and the House of Commons, and all concerned, disliked paying the money until the necessity came for it. The result is that we have had to pay tenfold for our negligence, and, what is infinitely worse, we have had to sacrifice an unknown number of valuable lives, partly because of our laziness and partly because of our stinginess.

If England was to blame—and surely it was, as the Statist claims—for its failure to be ready when its readiness would have prevented war, what shall be said of our people who, after the conflagration was under way in Europe, deliberately sat still for more than two years, though every act of Germany demonstrated its intentions far more clearly than the building of its warships should have given to England an opportunity to see its meaning as to that country.

Deliberately, out in the open, Germany defied the United States, murdered its people on the high seas, planned its campaign for the express purpose of bringing this country under its dominance when once it had destroyed the Allies; but we sat still, we refused to hear the roar of the conflagration, we refused to see that it was sweeping directly our way as clearly as the rush of a great prairie fire before the wind; we refused to make preparation, and today, with feverish haste and the numberless mistakes due thereto, we are trying to get ready to do the things we ought to have done two years ago.

Unpardonable blindness, indescribable narrowness of view, and absolute refusal to see that which was as plain as the noonday sun, made us halt, hesitate, and be recreant to the responsibility to our country. And still, to some extent, this condition continues.

In Congress and in the shipping board the most priceless time in all human history has been frittered away, and we are leaving undone the things which alone can save us from destruction.

It is foolish to shut our eyes to these facts. It is criminal to cover them up, for they exist, and the people should know them in order that these dangers may be overcome by prompt action.

We, too, shall have to pay as England is paying, ten times the cost of getting ready and sacrifice many lives which might have been saved but for our criminal short-sightedness and failure to act.

Let us look the situation fairly in the face and as a nation realize that upon our failure to act, upon the pacifists, upon the pro-Germans working in harmony with them and often in connection with them, will rest the blood of thousands and perhaps tens of thousands of the flower of American civilization. Until their blood-guiltiness is burned into the very conscience and soul of the nation we shall not adequately mourn for our criminal neglect.

## LOUISIANA'S VARIED PRODUCTIONS.

**L**OUISIANA is one of those wicked States in the South so severely scored by Assistant Secretary of Agriculture Carl Vrooman in his denunciation of the South's failure to raise foodstuff. But evidently Mr. Vrooman had failed to make a study of the actual facts of the case.

The Agricultural Commissioner of Louisiana (Mr. Harry D. Wilson) has issued a statement in regard to the crop values of that State for 1916, which shows that the total value of cotton was only about one-fifth of the total crop value of the State.

His figures show that the value of the corn produced in Louisiana considerably exceeded the value of cotton, and was nearly equal to the value of sugar; and then this wicked State, in addition to furnishing to the country \$36,000,000 worth of sugar and \$9,000,000 worth of molasses and syrup, continued its wicked ways by furnishing to the nation \$18,500,000 worth of rice and \$4,000,000 of vegetables, largely shipped to the North and West.

The total value of the agricultural products of Louisiana last year exceeded \$161,000,000.

Review the agricultural development of the State, and giving in detail some figures bearing upon last year's output, Commissioner Wilson presents the following facts:

Four or five years ago there were but few miles of hard-surfaced roads in the State. Today there are 1014 miles, and millions of dollars have been appropriated for a continuation of the work.

The following summary from the tabulated report by parishes shows:

Quantity	Value at
442,770 bales cotton.....	\$33,297,750
305,352 tons sugar.....	36,642,240
44,009,772 bushels corn.....	35,207,817
482,636 bls. molasses.....	4,826,360
172,236 bls. syrup.....	4,305,900
4,627,501 sacks rice.....	18,510,004
184,725 bushels peanuts.....	184,725
4,904,139 bushels sweet potatoes.....	2,452,065
808,000 bushels Irish potatoes.....	808,000
486,398 tons hay.....	4,863,980
2,517,900 bushels oats.....	1,258,950
63,730 boxes oranges.....	127,460
175,000 pounds tobacco.....	175,000
4,629 carloads vegetables.....	2,310,000
1,750 carloads strawberries.....	1,750,000
9,450 bushels wheat.....	15,200
200 bushels rye.....	244
cotton seed.....	8,000,000
<b>Total</b> .....	<b>\$154,735,819</b>

Making an average acreage production of \$29.62.

These are the actual products of the soil, and the valuations conservatively based upon prices which we know to have prevailed during the year; but had we computed the prices in accordance with the Government report of December, 1916, the total amount of Louisiana's agricultural products would have been increased by several millions of dollars.

As adjuncts to the above—in fact, as part and parcel of the farm products—we also report:

Quantity	Sold at
4,077,720 gallons milk.....	\$ 815,544
1,551 carloads cattle.....	1,861,240
286 carloads hogs.....	463,200
eggs, poultry, honey and fruits not reported, estimated at.....	3,500,000
<b>Total</b> .....	<b>\$6,639,944</b>

Besides these products of the farms, Louisiana's rural districts produce over three billion feet of lumber, about \$70,000 tons of sulphur, approximately the same amount of salt, lime rock in great quantities, and fourteen parishes with marvelous productions of oil and gas. Immense quantities of fish, oysters, crabs and shrimps were canned.

Two new aspirants for agricultural honors in Louisiana have made their appearance: the soy and velvet beans, and from the large quantity that is being planted this year there is an indication that these great legume crops will reach a million acres in 1918, adding twenty millions of dollars to the State's agricultural resources.

## DECREASING SUPPLY OF MEAT AHEAD OF US.

**M**ONTHS ago the MANUFACTURERS RECORD called attention to the fact that farmers are selling off their livestock, and even their chickens, tempted by present high prices for them, and because they claim that they cannot buy feedstuff at the prices now ruling and make any profit on raising livestock or chickens.

This statement, which was based on the knowledge of what was going on in farming circles, now finds remarkable confirmation in a statement issued from official sources in Washington, showing that for the week ending July 13 there was an increase of 66 per cent. in the receipt of calves over the corresponding period of 1916, notwithstanding the campaign which has been under way against the killing

of calves in order that the beef supply might be conserved. Cattle receipts at seven leading points showed an increase for the week over the previous week of 13.3 per cent. The combined receipts at these seven points from the beginning of the year up to July 7 were 4,479,000, or an increase of 747,000 over the same time in 1916. The average prices paid at these Western packing centers compared with the prices of previous years were as follows:

	Cattle	Hogs	Sheep
1917.....	\$12.15	\$15.15	\$9.85
1916.....	9.65	9.80	7.25
1915.....	9.20	7.60	5.10
1914.....	8.75	8.35	5.25
1913.....	8.00	8.80	4.25
1912.....	7.85	7.40	4.15
1911.....	6.30	6.64	4.10

These figures show that since 1911 there has been a steady gain in prices, which has largely more than doubled the figures in that time for cattle, hogs and sheep. This advance was in evidence long before the war. Years ago we pointed out this inevitable condition by reason of the gradual decrease of the livestock in the country in comparison with population.

The outlook is serious, for, while higher prices for grain may encourage a larger production of wheat, corn and other grains, the high price of livestock is tempting the farmers to sell off their breeding stock in order to cash in and get the benefit of present high figures. This means a still further decrease in supply and a still higher range in price in coming years.

## NOT EVEN THE RICH IN MARYLAND MAY LOAF DURING THE WAR.

**G**OVERNOR HARRINGTON writes the MANUFACTURERS RECORD that he is preparing a proclamation warning all male inhabitants of Maryland that they will be required to find regular employment by a certain date. This is in accordance with a law passed at the last session of the Legislature, which requires that all persons in good health must have some regular employment. This law is regarded as an excellent measure at any time, but is especially desirable in war times, when the resources of the country in man power will unquestionably be taxed to the utmost. Under this law idleness will not be tolerated, even among the rich, unless there is some valid excuse for it. It is provided that the State will find employment for all persons in good health now out of employment. Failure to do the work assigned to anyone by the State subjects the slacker to a fine of not more than \$500 or imprisonment of not more than six months, or both fine and imprisonment, at the discretion of a court of justice.

The first requirement of the law is that all able-bodied male persons between the ages of 18 and 50 years, inclusive, not regularly and continually employed shall register. This includes all loafers, not only the impecunious and habitual "sons of rest," the hoboes, bums, tramps, etc., but also all unemployed persons who may nevertheless be able to support themselves by reason of ownership in property or income, and also those supported by others. Failure to register is a misdemeanor, and punishable by a fine not exceeding \$50.

It is provided that the hours and rate of pay for work to which the State assigns the previously-unemployed person shall be the same as applies to others in the same occupation.

Exceptions are made in the case of students and persons fitting themselves to engage in trade or industrial pursuits, and no one is to be assigned to work he is not physically able to do. It is, however, intended that every able-bodied man in Maryland must do something in behalf of society, and at the end of the time called for in his proclamation the Governor intends to exercise the power given to him to put the machinery of the law into operation.

## BEATS THE WORLD.

**T**HE MANUFACTURERS RECORD fully agrees with Financial America when it says:

There is no agricultural belt in the world to compare with the South.

We have said so a thousand times and more.



## THE NATIONAL ENCAMPMENTS ARE A CHALLENGE TO THE MORAL FORCES OF THE SOUTH.

**W**ITHIN a month or two between half a million and a million men, entirely new to the South, will have been gathered together in the encampments which have been established by the United States Army, stretching from Maryland to Texas.

The selection of these encampments is, we believe, from every point of view, a wise one. It was made by men who are not controlled by any local or sectional feeling in regard to the South. General Wood and others responsible for deciding on these camps could not be charged with being dominated by politics or by any desire to be sectional in their decision. It is gratifying, therefore, from that point of view and from that of the material value of the establishment of these great camps that the South has been selected for so many of them.

The selection of this section throws upon the South a responsibility greater than it ever before faced, or greater than any other section of this country ever faced, to make its moral forces meet the dangers which threaten every camp wherever organized. The million or more young men who during the next year or two will be brought into the South and trained for the army will be morally as well as physically better or worse as a result of being encamped in the South, according to the way in which the moral and the religious forces of this section meet the responsibility.

It is incumbent upon every man and woman in this section to recognize that this is the greatest responsibility ever placed upon this section.

It is a responsibility individually to the men, who should be regarded as guests of the South and treated with every possible courtesy and consideration, and protected to the utmost extreme from every danger and temptation.

It is a responsibility which the South owes to the parents of these young men, that they may know that, in this land which has been credited—and we trust justly—with patriotism, with hospitality and with devotion to morality and religion, these sons of theirs shall be as safely guarded as if in their own homes.

It is a responsibility which this section owes to the nation and to civilization that these million or more young men while in the South shall be protected from every possible evil, that they may be trained physically, mentally and morally to be equipped for the mighty task to which the nation and civilization have called them.

No man in the South can afford to say that because these camps are not located in his particular vicinity there is no responsibility resting upon him. The responsibility rests upon every man and woman in the South. Those in the immediate vicinity of these camps must give of their time, their work, their consecration to the higher and holier things of life as well as their money, but they must be backed up by the moral and financial forces of other parts of the South, that the work may be carried on with abundant means and with the united strength of the South.

These men who are coming into this section are going to be the better or the worse for their experience. The destiny of civilization may, to a large extent, be shaped by the way in which the South meets this problem.

In the communities adjacent to these camps every church should be opened from early morning till late at night, equipped with books and papers and writing materials, and the men in the camps should

be made to feel that at any moment when off duty they can enter any of these churches and find a hearty welcome and an opportunity to read or write or to meet some of the leaders, men and women, in the religious life of the community. Some will say that this will cost money. Suppose it does? What are the people in these communities going to do with their money that is higher and better and nobler than to spend it in the interest of thousands and tens of thousands of these young men, who have come into this section to train that they may be prepared to save the women and the children of this section from the fearful destruction of German barbarism?

From every pulpit in the South these facts should be proclaimed, and every church that fails to measure up to this situation will be recreant to its responsibility to the nation and to God.

Instead of rejoicing that these encampments have been established in the South, merely from the material point of view that their coming will mean increased business activity in the community, this section should be stirred by a profound sense of responsibility, for unless it meets this responsibility in a way worthy of the situation the coming of these men will prove a curse to them and an injury to the nation and a danger to civilization.

In this section, where home life is sacred, where a large proportion of the population is true to the old traditions of integrity and honor, where the Bible is still the most honored book, and where the dominant influences are concentrated in religious activities, there should be an immediate awakening to the tremendous responsibility to give to these incoming men every possible advantage of religious life and social life, of protection from temptations which so constantly surround great encampments, that they may be the better for their coming into the South, and that the South may be tremendously broadened and developed by their coming and by the work which it does in measuring up to this opportunity to serve God and humanity.

## DON'T KILL BUSINESS BY KILLING PROFITS.

**O**N the authority of that responsible trade paper, the Oil Journal, we have authority for the statement that Secretary Daniels is fixing the price for oil at such a figure that the producers in Texas, Oklahoma and the Mid-Continent field will find it impossible to fill the orders. This policy would drive thousands of small operators out of business. Facts and figures are given to justify the statement of our contemporary. This is not in accord with the policy of President Wilson.—Leslie's.

From many directions come reports of the temporary halting which threatens the business interests of the country by reason of the effort of some of the Departments in Washington to take the last pound of flesh in dealing with business matters.

Secretary Daniels of course means well in his effort to hold prices down, but it is not possible for the business interests of the country to live and expand on the basis of ten per cent. profit over the cost of production. Any industrial interest which does not make more than that is not in a position to adequately expand to meet the needs of the times.

The oil business, for instance, is risky to the extreme, especially that part of it which bears on the boring of new wells and the opening up of new territory. While many millions of dollars have been made by great oil concerns and by the lucky strikes of oil gushers, millions almost without number have been lost by those who have dared to risk all on the venture of striking a well. What is known in the oil world as "wildcatting" or the hunting for oil in new territory by putting down expensive wells is a gamble pure and simple, and it takes the gambler's ability to lose money on the hope of big winnings to tempt men into this business. But there is such

a growing shortage of oil that the country is being threatened with an oil and gasoline famine. There is no possible hope of being saved from this situation except by the "wildcatting" of thousands of men willing to risk big sums for the chance of making a strike and earning still greater sums.

Unless new and unexplored oil fields can be opened up and existing fields be more largely developed we shall have a real oil and gasoline famine.

**Any move by Secretary Daniels or by anyone else which limits the profit on oil or on other products to what it costs the big and successful concern to produce, without taking into account the losses incurred by the unsuccessful concerns, will destroy the prosperity upon which our ability to maintain war depends.**

To this self-evident truth to all accustomed to business operations the Administration in every branch of the service should give prompt heed. A penny-wise policy will be worse than saving at the spigot while knocking out the head of the barrel. We may save a few dollars by this penny-wise policy in the purchase of material, but if we destroy the nation's prosperity we shall have no expansion of industrial activity to provide more oil, more steel, more coal and the other things needed.

## AS VIEWED BY A SHIPPER.

**H**OWARD H. STAFFORD, president of the Georgia-Carolina Brick Co., Augusta, Ga., sends to the MANUFACTURERS RECORD a copy of the following letter, in regard to the full loading of cars:

Mr. E. R. Oliver, Asst. Gen. Frt. Agt.,  
Southern Railway,  
Atlanta, Ga.:

Dear Sir—We read with interest your letter of June 23 to the Editor Manufacturers Record, published in their issue of July 19. We heartily agree with your views expressed, and believe it is the duty of everyone, both railroads and shippers, to assist in every way possible to relieve the car shortage. In regard to the loading of cars to capacity, our company is now utilizing, just as far as possible, every pound of carrying capacity of the cars furnished us for loading, including the 10 per cent. overload allowed.

However, we believe that the preaching of the railroads would be much more effective if they would correct some conditions existing in their own ranks.

We recently noticed that all cars of coal coming from one coal field were loaded to only a small percentage of their carrying capacity. We listed several of the cars and found that ten cars with a carrying capacity of 1,056,000 pounds were loaded with only 658,200 pounds of coal. Upon inquiry of the mines as to why these cars were loaded so light, we were advised that, because of the weak condition of a bridge at Chattanooga, cars originating on your Q. & C. branch could only be loaded to a gross weight of 115,000 pounds. It does not seem possible that a railroad would allow a condition of this kind to exist and contribute largely to the present car shortage, especially as so large a portion of the traffic on this branch is coal, which equipment is claimed to be particularly short.

Will appreciate hearing from you.

Yours truly,

HOWARD H. STAFFORD,  
President.

## A GOOD EXAMPLE FOR MANY.

**T**HE Youngstown Sheet & Tube Co. of Youngstown, Ohio, believes that the policy which has been advocated by the MANUFACTURERS RECORD in regard to the necessity of carrying forward as rapidly as possible in these war times many lines of construction activity is the wise policy to pursue, and is showing its faith in that policy by building at the present time a \$2,000,000 plate mill, and also carrying forward a contract for 102 additional Kopper's by-product ovens.

Referring to this work, the company writes us:

This is sufficient evidence that we are believers in the policy advocated by the MANUFACTURERS RECORD.

The aggregate improvements which are being made by the company will amount to about \$5,000,000.

Blessed are the men who dare to do big things in these days and put their capital into creative work bearing so closely upon the nation's ability to maintain the war!

## COAL PRODUCTION OF THE UNITED STATES TO BE COVERED BY WEEKLY REPORTS.

**F**ORTUNATELY for the country, the United States Geological Survey has undertaken to compile weekly official figures as to the bituminous coal output of the country by States and sections, with details in regard to the reasons which may prevent full production or which may enable mine operators to secure fuller results. With this information before it the Committee on Coal Production as well as the general coal-consuming public can be kept informed of exactly what the mines are bringing forth and what is hindering a greater output of coal. The Committee on Coal Production will thus be able to concentrate its efforts wherever the greatest stringency lies, and on this point the first report says the "trouble is lack of cars"; in other cases it is labor shortage. The coal operators are acting in harmony with the Geological Survey, and are preparing to make their reports full and complete.

The first figures available give a comparison of the first week of July with two weeks of June. These are furnished by trade organizations already in operation, representing about 25 per cent. of the production of the country. Some of the important producing districts, particularly Alabama, West Virginia, parts of Pennsylvania, Ohio and the territory from Texas to Iowa, do not appear in this first statement, but are rapidly organizing their forces for this purpose.

The districts covered by this first statement are distributed over a large producing area, and are indicative, so the report says, of what is happening in the coal-mining industry. On these points this report says:

For the three weeks reported it will be noted that the average loss was fully one-half million tons, which would indicate that the weekly output of mines of the whole country is not less than 2,000,000 tons below full-time capacity. By far the greatest factor concerned in the losses was the inadequate car supply. Thirty-one per cent. of the total full-time capacity of these representative mines was lost because the supply of cars at the mine mouth was insufficient. Other important causes were labor deficiency, crippling the industry to 4.5 per cent. of its full-time capacity, and mechanical breakdowns within the mines, to which losses amounting to 3.2 per cent. of the full-time output were attributed. No mines reporting to the Geological Survey mentioned losses because of no market for their product.

The per cent. of full-time output produced in the States reporting—Maryland, Illinois, Ohio, parts of Pennsylvania, Eastern Kentucky and Tennessee—show a total for June 23 of 72.9; June 30, 71.4; July 7, 76.5. "The increase in the percentage of full-time capacity from 71.4 for the week ending June 30 to 76.5 for the week ending July 7 is attributed to the fact that the mines were shut down on July 4, and the railroads were, therefore, able to supply more of the cars ordered for the remainder of the week."

The full-time weekly capacity of the plants reporting and the causes for the shortage were as follows:

TONNAGE PRODUCED AND CAUSES OF LOSS.

Week ended	Full-time weekly capacity.	Actual production (net tons).	Losses, production all causes (net tons).	Per cent. of full-time output.
				Produced. Lost.
June 23.....	2,059,327	1,495,272	564,055	72.5 27.5
June 30.....	2,175,287	1,516,267	659,020	69.7 30.3
July 7 (five-day week)	1,780,024	1,335,861	444,163	75.0 25.0

PER CENT. OF FULL-TIME OUTPUT LOST ON ACCOUNT OF:

Week ended	Car shortage.	Blocked loads.	Laborable and shortage.	Mine disability.	No market.	All other causes.	No cause given.
June 23.....	20.4	0.1	3.2	2.5	.....	0.3	0.9
June 30.....	21.0	0.1	4.5	2.3	.....	0.1	1.4
July 7.....	12.3	0.1	6.5	4.3	.....	0.3	1.3

Coal consumers and some of the daily papers have been undertaking to claim that there was "no shortage of cars." If they can prove this fact to the United States Government and to the railroads of the country, a wonderful change will be brought about in the whole transportation system of the country. Every man who is trying to ship stuff of

any kind, every railroad man and all Government officials are laboring under the impression that there is a very great shortage in rolling stock for coal, iron ore, lumber and other products. Even the work on some of the cantonments, which are of such supreme necessity to the country, is being held up by the shortage of cars for delivering lumber. But some newspapers, wholly unfamiliar with conditions, and some men who form their conclusions based on what these newspapers say, have made discoveries which, if correct, would prove of limitless value to the nation. Unfortunately, it has to be said of them in this case that "their new things are not true things."

## TRUE VS. FALSE EDUCATION.

**"H**OW many students start on their college work who are both mentally and temperamentally unfit for the course they are trying?" This question is asked by L. S. Randolph, dean of the Engineering Department of the Virginia Polytechnic Institute, in an article on "Character and Fitness in Education," which is reprinted in pamphlet form from the Bulletin of the Society for the Promotion of Engineering Education. He suggests that "with the modern development of psychology and character reading such blunders are inexcusable, for the students in a technical school can be differentiated according to their mental qualifications with quite a great deal of accuracy, and the mental qualities needed in the different lines can be quite accurately determined."

We believe that Mr. Randolph in discussing this subject of character and fitness of students for a line of study they have selected has struck at the root of the trouble in our modern system of education, for it is acknowledged there is something wrong somewhere when fully two-thirds of the students entering college leave before they graduate, and when those that do graduate, in far too many cases, are wholly unsuited for their chosen life work.

In this connection Mr. Randolph says that in schools of engineering and technical schools distinction as to the fitness of students for different courses of study should be closely drawn. A student should not be allowed to study to become an engineer if he is more fitted to become a lawyer or a doctor. He advocates "special training to strengthen the mental weak points"; that a different method of training should be employed with different types, and "in the lower classes sections should be arranged from a psychological basis rather than on an alphabetical, and instruction given accordingly."

"In the higher classes," Mr. Randolph writes, "there has been no difficulty in separating the executive, the scientific, the salesman type, etc., and by means of individual work starting them out on successful careers when otherwise they would have been misfits," and he adds:

"Relatively few of our schools make any systematic attempt to determine of what material the man is made. Nearly all of our big industrial establishments put a graduate through more or less training that will primarily determine of what sort of material he is made. As a case in point, a graduate was sent to a big pump works, and when he was afterwards asked what they gave him to do, he replied that he was sent to the casting-cleaning shed to clean a big pump casting. When asked if he had done it, he said he cleaned it as if he was polishing a piano, and for four or five days he stayed at that work. This man was not putty, but a good high-grade tool steel, and now stands at the head of his profession. In the same class with him a man who led his class in academic work was to all intent and purpose a failure under the same conditions; under different conditions he would not today be in his grave with a broken heart. Instances of this kind are constantly occurring, and amply justify the criticisms made by the employers."

"How often have I seen a man with strong executive ability eating his heart out, after graduation, on account of the lack of knowledge and ability to

carry out his natural inclinations and do that for which he is best fitted. In other words, the pedagogical methods should be adapted to the mental peculiarities or weakness of the student, just as we adapt the exercise in the gymnasium to the physical characteristics or the work in the shops to the characteristics of the material. Putty is an excellent thing, but we don't work it with a steam hammer. Wood is splendid, but the last thing to be worked in a cupola."

"And the last, and, the writer would say, to his mind, the most important, is to give the man such training in character reading as will enable him to see and recognize the various types of men, know how to determine for what they are best fitted. For through this law by which he can read the character of others the answer can be given to the cry which still goes up from all mankind:

"O wad some Pow'r the giftie gie us  
To see oursel's as others see us!"

## SENATOR STONE'S COLLEAGUE.

**R**EED has made speech after speech on the subject. The other day he emitted his forty-third or eighty-fifth mess of venomous drool.

He spoke about piffing things. His gray hair picturesque and his blue tie all done up prettily, he paced up and down the aisle and sneered and snarled and barked. There was no discussion of the great matters at stake. There was a beclouding of the issue. There were slanderous attacks upon Hoover.

Then, switching his line of "argument"—save the mark!—Reed almost wept over the trials and tribulations of the man who eats in a railroad dining car. The prices were entirely too high for the simple traveler.

But nothing was said about the prices the hundred million who do not travel in dining cars have to pay. Senator Reed did not go after the wheat and butter and egg sharks of Chicago, nor the meat packers of his own Missouri. On these subjects he was as silent as the tomb.

He did not discuss whether Hoover could curb speculation and hoarding of the people's food. His speech was simply to kill time.

And time is precisely what the food jugglers want killed. Delay long enough, drool long enough, and the sharks will have all the food. Then the people, as usual, will have to pay the piper.—The Shreveport Times.

Are the food sharks or the liquor interests, or both, back of Reed? They are twin curses of civilization, and perhaps Reed wanted to help them.

## BUILDING WOODEN SHIPS AT A PROFIT.

**A**LONG the South Atlantic and Gulf Coast many wooden ships for private capitalists are under construction, in addition to those which are being built for the Government. Capitalists have seen the opportunity, during the last year, of building ships in the South, and many yards have been vigorously at work turning out ships—big and small.

Some of the profits which have been made in this shipbuilding campaign show the enormous demand for ships. A large boat built at a Southern yard was immediately chartered for a European voyage at considerably more than one-half of her total cost. Naturally, the man who invested in the building of that ship has been putting his money back into the building of other ships as rapidly as possible.

Another ship which was built in a Southern yard was promptly sold at two and one-third times the cost.

## FROM STANDING TREE TO FINISHED HOUSE WITHIN SIX DAYS.

**A**T Camp Taylor, near Louisville, one of the administration buildings is said to have been built partly of lumber cut from a Mississippi pine forest less than a week before. The trees were felled and went through the mill Saturday, were kiln-dried Sunday, loaded Monday on special cars commandeered by the Government, rushed to Louisville at almost passenger-schedule time, and when the carpenters at Camp Taylor laid down their tools at the end of work the following Saturday men were moving desks and other office paraphernalia into a house which had been part of the forest six days previously.



## ONE MORE GLARING MISTAKE BY THE UNITED STATES DEPARTMENT OF AGRICULTURE.

IN the Weekly News Letter of July 11, issued by the Department of Agriculture, the following remarkable statement appears:

As each person, it is calculated, consumes about three-fourths of a barrel of flour a year, and as the population of the Southern States is approximately 30,000,000, it is obvious that the general use of these wheat-flour substitutes would result in a marked reduction in the total quantity of wheat flour consumed in the South. On the basis of a total flour consumption in the Southern States of over 22,000,000 barrels, it has been estimated that if the practice became universal the use of 25 per cent. of flour substitutes grown in the South would save over 5,500,000 barrels of flour. As a matter of fact, however, the saving would be far greater than this, because a much larger proportion of flour substitutes can be used in the preparation of biscuits than in bread. In view of this fact the total saving might amount to 10,000,000 barrels of white flour. All this flour, it must be remembered, is imported into the South from other sections, and the consumer must pay freight rates on it.

According to this official report of the Department of Agriculture, the South does not produce a bushel of wheat and not a barrel of flour. The entire consumption, estimated at 22,000,000 barrels of flour, according to this official statement, is brought into the South from elsewhere, for the report says:

"All this flour, it must be remembered, is imported into the South from other sections, and the consumer must pay freight rates on it."

Wondering how the Department of Agriculture could make so great a blunder and entirely overlook what the South produced in wheat, we asked the Department for an explanation as to what States it classed as Southern and as to the basis of computation by which it reached a flour consumption of 22,000,000 barrels. In reply we have from one of the bureaus the following letter:

According to the World Almanac for 1912, the population of the South Atlantic States in 1910 was a little over 12,000,000; that of the East South Central States somewhat over 8,000,000, and that of the West South Central States was 8,500,000, making a total population for those Southern States mentioned a little over 29,000,000.

The average annual consumption of flour in this country is about one barrel per capita. It was assumed that the Southern people did not eat so much wheat bread as the rest of the country, and because of that fact it was also assumed that about three-quarters of a barrel of flour per capita would approximate the amount of flour consumed. These are mere assumptions, and if they are not correct and you have any information which will give more correct data, we shall be very glad, indeed, to receive the same.

The Census Department of the United States issues annually an estimate of the population of the country, but an official of the Department of Agriculture has to turn to the World Almanac of 1912 for the statistics of the South's population of 1910 in order to get the figures! Surely, a school of statistics should be established in Washington for the benefit of men who undertake to handle the Government's figures. This is 1917, but a Government official charged with the responsibility of issuing statements about the consumption of flour in the South finds nothing later than the figures of 1910, seven years ago, published in the World Almanac for 1912, five years ago. No wonder the Department of Agriculture is constantly putting forth the veriest trash! There are some bureaus in the Department of Agriculture which send out information of much value, but evidently there are other bureaus which need a radical overhauling.

But even if we should take the figures of 1910 instead of the figures of 1916, the absurdity of the statement that all of the flour used in the South is "brought from elsewhere" is strikingly illustrated. For in 1910 the production of wheat in the South Atlantic States, the East South Central States and the West South Central States, classed broadly under the term of Southern States in this report, was 113,992,000 bushels.

In 1916 the production of wheat in these States was 125,642,000 bushels, or equal to 25,000,000 barrels of flour. Thus when we take into account the whole South as covered in the Agricultural Department's estimate, this section actually produces

more flour than the Department of Agriculture estimates its consumption to be.

There are some States in the Central South which produce much less wheat than their consumption, a few which produce little or none, but there are other States where the production of wheat is in excess of local demands.

Just a little more intelligence in the handling of statistics bearing on the South, and, indeed, for that matter, on the country, is greatly needed in some bureaus in the Department of Agriculture.

In this case the official statement has gone to the world that every barrel of flour of the 22,000,000 assumed to be used in the South is brought in from other sections, a direct slander against this section without the shadow of a foundation.

## A REMARKABLE DECLINE IN SHEEP-RAISING—SHALL IT BE SHEEP OR DOGS?

THE total number of sheep in the South in 1860 and fifty-seven years later, or in 1917, was as follows:

Number of sheep in the South in:			
State.	1860.	1917.	Decrease.
Alabama	369,081	121,000	248,081
Arkansas	202,674	124,000	78,674
Florida	29,938	119,000	89,062
Georgia	512,618	150,000	362,618
Kentucky	938,999	1,135,000	216,010
Louisiana	180,835	216,000	35,165
Maryland	185,793	223,000	37,207
Mississippi	337,754	193,000	144,754
North Carolina	546,749	140,000	406,749
South Carolina	233,509	30,000	203,509
Tennessee	773,317	650,000	123,317
Virginia	1,042,946	666,000	376,946
West Virginia		715,000	
Total	5,324,106	4,546,000	778,106
Missouri	937,445	1,370,000	432,555
Oklahoma		101,000	101,000
Texas	783,618	2,328,000	1,544,382
	1,721,063	3,802,000	2,080,937
Total for South	7,045,239	8,348,000	1,302,761
Total for rest of country	16,272,437	40,135,000	23,862,563
Total for United States	23,317,736	48,483,000	25,165,263

In 1903 the United States had 63,960,000 sheep, or 15,500,000 more than at present, nearly every year since 1903 having shown a steady decrease, and still we wonder why meat is high!

From these figures we find that during the last 57 years the number of sheep in the Central South has decreased by 778,196. Alabama shows an actual decline of 248,000, Georgia 362,000, Mississippi 144,754, North Carolina 406,000, South Carolina 203,500, and Tennessee 123,000. Thus, despite the great increase in population between 1860 and 1917, these States have three-quarters of a million fewer sheep now than they had then. In 1860 there were 5,324,106 sheep in these States, and on the first day of January, 1917, 57 years later, there were 4,546,000, an actual decrease of 778,196 sheep, or over 14 per cent. Of course, Missouri and Texas, which in 1860 were comparatively undeveloped, have more sheep now than in 1860.

The MANUFACTURERS RECORD does not claim that the decline in the sheep-raising industry in the Southern States is wholly attributable to the ravages of the sheep-killing dogs, but they are one of the main causes.

That wandering, worthless curs are a menace to the sheep-raising business—a business like that of the raising of cotton, which produces both food and raiment—is attracting more and more attention, and several States are working on a solution of the problem.

The Twin City Sentinel, Winston-Salem, N. C., has an editorial entitled "A Campaign Along the Right Line," in which it says:

The MANUFACTURERS RECORD is leading a crusade for the placing of heavier taxes on dogs with a view to encouraging the sheep industry. It deserves the support of newspapers and individuals throughout the South in this excellent work.

Of course, there are some who will say that the national lawmakers should not be bothered with such an insignificant matter as the dog problem, but a little figuring as to the amount they cost in this country every year, and particularly in the South, through the inability to develop a sheep-raising industry to the proportions that would be

possible if the dog menace were eliminated, will show that the proposition is not such a small one, after all.

Consider for a moment the possibilities of profit arising from the sheep industry at present prices of mutton and wool. Consider also the vast amount of food consumed by the millions of dogs in this time of food scarcity. A little reflection along this line will convince the average person, we believe, that we should protect the sheep more and the dog less.

J. G. Ferneyhough, State Veterinarian of Virginia, in a recent interview in the Richmond Times-Dispatch, said that were the cur-dog evil checked by adequate means the disease of rabies among animals would disappear, and stock raising would at once become one of the most profitable industries of Virginia.

An article in the Anderson (S. C.) Daily Mail on the subject of dogs said:

Anderson county is paying out \$327,050 every year for feeding dogs, or more than the county spends on the public schools. It is amazing. It is true that as a rule dogs are fed from the scraps from the table—that and what they can pick up around the premises, eggs, young chickens and the like. But the scraps that are fed to dogs could be fed to hogs, chickens and cows. They would yield a return, but dogs yield no return.

The Arkansas Gazette of Little Rock, in an editorial commenting on a recent statement in the MANUFACTURERS RECORD regarding the cost of dogs, says:

Here in Arkansas sheep-raising is unprofitable because of the packs of vagrant dogs that may reduce or destroy the sheep-raiser's profit over night by killing sheep and lambs. So it will be seen that not only do the dogs cost a stupendous sum for upkeep, but they reduce the food supply by preventing the raising of sheep and goats.

A correspondent in the Baton Rouge (La.) State-Times writes:

We are rather in sympathy with the recommendation of Harry Wilson, Commissioner of Agriculture and Immigration, to the Governor, that he include in his call for an extra session authority for the General Assembly to deal with the stray-dog subject. Mr. Wilson is right. Louisiana can't have worthless curs and valuable sheep. The two don't go together in the same neighborhood. If Louisiana wants stray dogs roaming over the land, seeking what they can devour, then Louisiana can't have sheep that provide wealth through their wool and mutton. The State should give up the cur and take the sheep. A law to prohibit stray dogs looks like a rather trivial subject for a Legislature, sitting in special session, to take up, but there is nothing more important than the development in Louisiana of the sheep industry, and the passage of the law Mr. Wilson seeks is the initial step. Until the prohibition he advocates against dogs is set up there can be no development of the sheep industry.

A week or two ago the Saturday Evening Post published an illuminating article on sheep raising, and gave the following pertinent facts:

In the face of war-time taxes, is it not sensible to tax out of existence the worthless, wandering curs that make a profitable sheep industry impossible, that spread dangerous diseases, that consume more food than all the children in our public schools, and that menace our homes with hydrophobia?

As a rough guess, 75 per cent. of the dogs of this country are worth no more than their hides would bring on the market. A few well-bred and well-trained dogs are useful in handling stock; some are worth keeping as companions. But any uncontrolled dog is a menace to the community. He is a spreader of dangerous diseases—witness the quarantine against dogs during the outbreak of foot-and-mouth diseases. The spread of hog cholera is frequently attributed to some restless canine. But the most conspicuous damage done by these superfluous animals is suffered by the sheepman. Sections that were once big mutton and wool producers have practically gone out of business—from this cause alone.

The Indiana Legislature now has before it a bill for an improved law, based upon the experience of various States and backed by level-headed stockmen. It should be supported by every man who is interested in increasing the meat supply and making livestock farming more inviting. The present scarcity of meat and our difficulties in controlling contagious diseases of stock should be strong factors in helping the bill to become a law in Indiana and in encouraging the adoption of it by other States.

N. Buckner, secretary of the Asheville Board of Trade, writes the MANUFACTURERS RECORD:

As information, will state that a few years ago a man near Asheville started to raise sheep and had a good bunch of them. One night two worthless dogs got into the sheep pasture and killed forty-two ewes.

This is only one among thousands of instances where the "Evidence is against the dog."

Write your Congressman for the bulletins sent

out free of charge by the United States Department of Agriculture, entitled "The Sheep-Killing Dog, and the Dog as a Breeder of Disease," and perhaps you will then realize that the dog question is one of national importance.

#### \$640,000,000 FOR AIRPLANES.

**T**HE proposed expenditure of \$640,000,000 for airplanes may perhaps be the deciding factor in the war. At any rate, their construction must be rushed as though the whole issue of success or defeat depended on them, and at the same time we must press every other feature of war preparation with equal vigor. It is only through a combination of all that we can win this fearful war.

#### O! THE UNSPEAKABLE AGONY OF IT!

**S**ARAH BERNHARDT, in a copyrighted article recently issued by the Star Company and published in some of the leading daily papers of the country on July 15, tells a story of the horrors of Germany's invasion of France which, though known to many people in this country, brings clearly to light the magnitude and the awful work of German lust and barbarity.

The story is almost too horrible to print, but we must need face it if we would know why America must fight and why American men must, on the battlefields of France, struggle to save this country from invasion.

Madame Bernhardt says that in the section of France occupied for two years by Germans, but from which they have been driven, that country "faces the problem of what to do with at least 100,000 children of violence—the babes of hatred, brutal fathers and of desecrated maids and wives, and when the German is finally thrust from France there will be other armies of these children to be cared for." "In all the terrible pages of this worst of wars," she says, "there is none more tragic, more sinister, more devilish, than this that registers the brood of brutality and lust," and she asks what is to be the fate of these little ones, begotten by such brutes, borne by mothers who necessarily lived in an awful realization of their agony and who hated their offspring as they hated their lustful brute fathers.

This army of babes, she says, is one of France's greatest problems, and the question has been asked, What right have such children, if any, to live?

The MANUFACTURERS RECORD told some weeks ago of how, in many of the medical societies of this country, this problem has been seriously discussed. Madame Bernhardt takes the position that, despite the conditions under which they have been brought into the world, they must be cared for, but that they must immediately upon birth be removed from the side of the mother, who must never again know whether they are alive or dead.

In closing she tells the story of the effect of this awful tragedy in the life of the French people in the following:

One man I knew, a brave soldier of France, who had received the Croix de Guerre. Proudly he wore it upon his breast when he went "home" for a three-days' leave of absence. "Home!" He covers his face with his hands and groans when he pronounces the word. It summons this vision: A broken door with the rose wreaths torn from it as by an iron hand. The dead body of his delicate wife, felled as by one blow from a giant's hand. His three beautiful young daughters dead, their despoiled young bodies mutilated and profaned.

With the vision on his brain he staggered back to his camp. He told his story to his commander.

"That is what I found, mon General," he said, with a dry sob that brought something to the eyes of his chief. Yet war is war. Discipline is discipline. No man of war must ever allow himself to dissolve in tears.

"Duty! Francois, mon ami," he said. "Go upon duty at once; it will cool the fire in your brain."

The man saluted and stumbled out of the tent. The next day he was detailed to take three German prisoners to a place of detention—a prison camp.

"Disarm him," the general commanded.

Within the hour, Francois Lacrosse returned. He saluted his general.

"Punish me as you wish," he said, in a strange voice.

"I killed them all," he stretched forth his hands, "with these."

Of a certainty, he was not punished. We may leave the vengeance for their violated homes to the soldiers of France. For the body of every dead girl taken from a French home and found in the trenches, death to twenty Germans!

#### MORE STEEL NEEDED.

**R**EFERRING to the proposed armor-plate plant, the construction of which has been temporarily deferred by the scarcity of steel and machine tools, Secretary of the Navy Daniels writes the MANUFACTURERS RECORD:

We are going to build the armor-plate factory as fast as possible. Please do not get the impression that we are going to abandon it; on the contrary, as fast as we can, we are going to build it, and I am in hearty sympathy with the work you are doing.

Referring to the delay in building a plant by reason of the scarcity of steel, Secretary Daniels emphasizes the fact that the Army and Navy Departments have felt the need of additional steel plants in order to increase the output.

This comes in reply to letters to Mr. Daniels and to other Washington officials, urging them to fully realize the desperate need of steel, which means the desperate need of building more steel plants. This cannot be brought about except through the broadest co-operation of the Administration and of Congress with capital and with the steel-making interests of the country to encourage in every way possible the enlargement of the output of iron and steel in this country. Every day that there is a delay in giving this encouragement we are twenty-four hours closer to the possibility of defeat in the war.

#### With Pershing in France.

From a member of the American expeditionary forces in France a letter has come to a friend in Baltimore which affords an interesting glimpse behind the scenes and indicates the spirit of the boys who have gone abroad. An extract from this letter is given herewith:

"It is needless for me to say that I was delighted when the opportunity to go abroad was offered me, and I lost very little time in accepting. The trip was excellent in all respects; you have read of our arrival (General Pershing's) in England and France before now in the newspapers, and if you are a movie fan you have no doubt seen the pictures that were taken of our arrival and entertainment. England treated us in a royal manner, and the reception and enthusiasm given and displayed in Paris was such as cannot be described. I doubt even if a 'sob-artist' on Mr. Hearst's Journal could do it justice. Seriously, though, the like of it has never been known. They were glad to welcome us to France, and the reception given was wholehearted and sincere.

"I wish I could write you more, but let me sum it all up in saying that no American will regret ever coming to France, and no American would hesitate coming if he knew the conditions as they exist. It has been said that the United States cannot appreciate the war from such a distance. The United States will never be able to appreciate it—even those of her citizens who have already lost relatives and friends who have served in other armies under other flags. While the departure of American boys to Europe should be the occasion for solemnity, it should also be an occasion for rejoicing."

#### Roosevelt's Strenuousness Needed in Iron Trade.

The Matthew Addy Company, iron merchants of Cincinnati, in their weekly report say:

"Consumers of iron are tremendously interested in the possibility of Government regulation of prices. They assume that any regulation would be downward. And this week sales of iron for forward delivery have halted, as the general attitude is that it is well to wait and see what will happen.

"But the fundamental fact remains that iron is in short supply. Every day makes this plainer. There are scores and scores of foundries that have not enough iron on hand to run through the week. Their repre-

sentatives are haunting the furnaces, begging for shipments. The mails to the selling agents are burdened with pitiful appeals from consumers for more iron. There are no reserve stocks at the furnaces from which to draw, and the whole country is practically on a hand-to-mouth basis—not a pleasant picture. It is difficult to realize that this great country, so rich in raw materials, so greatly equipped with facilities for their utilization, should not be able to rest perfectly easy as regards iron. But we have not overstated the case. There is a real shortage, and it is growing worse. Naturally, spot iron is in great demand. Anything that is really made and that can be shipped promptly is wanted, and spot-iron prices are \$50 and up—mostly up, depending on analysis.

The difficulties of making iron increase. The shortage of labor is alarming, and the prospect of men from the mines and the furnaces being drafted for military service is not agreeable to contemplate. Ore temporarily is in pretty good shape, but no one can tell what will happen in the winter. Coke is hard to get, as the supply is less than the demand.

It has been hoped by many iron masters that this summer things would ease up and there would be an opportunity to take things less strenuously. But there seems no prospect of any such breathing spell. It is a pity that Theodore Roosevelt is not making iron these days.

**The strenuousness, the constant battle to get cars, the struggle to keep a working force together, would appeal to him as being suitable to his temperament—a real man's job.**

#### Alabama Iron Goes North by All-Water Route.

Florence, Ala., July 19—[Special]—The North Alabama iron industry has been given a great impetus by the near completion of the deep-water channel at Colbert Shoals, in the Tennessee River, which now gives steamboat and barge lines deep water throughout the year from the Florence and Sheffield furnaces, on the Tennessee River, in North Alabama, to such centers of population on the Mississippi and Ohio rivers as St. Louis, Memphis, New Orleans, Evansville, Louisville and Cincinnati as well as to numerous smaller places on those rivers.

In fact, although the channel at Colbert Shoals, which is just below Muscle Shoals and Florence, is not fully completed, the Florence and Sheffield furnaces are already taking advantage of cheap river transportation to the North, having shipped over 50 steamboat and barge loads of pig-iron to points on the Ohio River.

Engineer J. B. Shute, in charge of the Government works at Colbert Shoals, has advised the Florence Chamber of Commerce that the deep-water channel at Colbert Shoals will be completed in about two months, or by the middle of September, but that steamboats have no trouble in passing through the channel now, the work is so nearly completed.

Engineer Shute, who is an authority on Tennessee River matters, also advises that the river is now open throughout the year to large steamboats and barges, and that an unlimited amount of iron may now be shipped down the Tennessee River and to cities on the Ohio and Mississippi rivers and their branches.

On July 18 the towboat Enterprise of Cairo, Ill., visited Florence to tow a cargo of pig-iron to Chicago. This boat was chartered by Captain Swain of Peoria, Illinois.

The river route to Chicago from Florence, which is at the head of deep water, is down the Tennessee River to the Ohio just above Cairo, then into the Mississippi to the Illinois River just above St. Louis and up that river and through the canal to Chicago.

Iron men have been quick to realize what the opening of deep-water transportation from a Southern iron-producing section to the large cities of the North on the Mississippi and Ohio rivers and their branches will mean, and great activity in securing iron-ore lands and in planning for the production in this section of iron on a great scale is noticeable.

At Camp Travis, Fort Sam Houston, Tex., a big barracks structure rose from the ground in exactly an hour and a half by the watch, and a similar record was made at Camp Taylor, Louisville, Ky., in an efficiency



## A Great Banker of German Descent Discusses the War for World Conquest

Otto H. Kahn, one of the foremost bankers of the world, of Kuhn, Loeb & Co., New York, which ranks among the world's greatest banking-houses, is a German by descent. But had his views as presented in an address in New York been followed by the Germans and the pro-Germans of this country infinite good would have been done to the whole German race.

The German propaganda carried on in the United States was the greatest injury which could have been done to Germans and to Germany. It created the impression in Germany that this country could be deceived and kept permanently neutral while Germany overran the world. On the other hand, this propaganda naturally reacted in this country when people came to learn of the deception and trickery, the blowing up of munition plants, murder and every other evil done in the United States in order to advance Germany's interests. Mr. Kahn made the subject so clear as to the infinite injury which has been done to Germany by its present method of warfare that it is a pity his speech cannot be read by every man in this country, as well as by everyone in Germany.

While he justly loves the land from which he has descended and the high ideals known to the old Germany, to the Germany which gave birth to many of the world's great men, Mr. Kahn, at the same time, has a bitter hatred for that barbarism of Kaiserism which has done such limitless destruction to the ideals of the old Germany and to the civilization of the world.

In the course of his address he said:

"We have met today in pursuance of a high purpose, a purpose which at this fateful moment is one and the same wherever, throughout the world, the language of free men is spoken and understood.

"It is the purpose of a common determination to fight and to bear and to dare everything and never to cease nor rest until the accursed thing which has brought upon the world the unutterable calamity, the devil's visitation of this appalling war, is destroyed beyond all possibility of resurrection.

**"That accursed thing is not a nation, but an evil spirit, a spirit which has made the government possessed by it and executing its abhorrent and bloody bidding an abomination in the sight of God and men.**

"What we are now contending for, by the side of our splendidly brave and sorely tried Allies, after infinite forbearance, after delay which many of us found it hard to bear, are the things which are amongst the highest and most cherished that the civilized world has attained through the toil, sacrifices and suffering of its best in the course of many centuries.

"They are the things without which darkness would fall upon hope, and life would become intolerable.

"They are the things of humanity, liberty, justice and mercy, for which the best men amongst all the nations—including the German nation—have fought and bled these many generations past, which were the ideals of Luther, Goethe, Schiller, Kant and a host of others who had made the name of Germany great and beloved until fanatical Prussianism run amuck came to make its deeds a by-word and a hissing.

"This appalling conflict, which has been drenching the world with blood, is not a mere fight of one or more peoples against one or more other peoples.

"It goes far deeper.

"It sharply divides the soul and conscience of the world.

"It transcends vastly the bounds of racial allegiance. "It is ethically fundamental.

"In determining one's attitude towards it, the time has gone by—if it ever was—when race and blood and inherited affiliations were permitted to count.

"A century and a half ago Americans of English birth rose to free this country from the oppression of the rulers of England. Today Americans of German birth are called upon to rise, together with their fellow-citizens of all races, to free not only this country but the whole world from the oppression of the rulers of Germany, an oppression far less capable of being endured and of far graver portent.

**"Speaking as one born of German parents, I do not hesitate to state it as my deep conviction that**

**the greatest service which men of German birth or antecedents can render to the country of their origin is to proclaim, and to stand up for those great and fine ideals and national qualities and traditions which they inherited from their ancestors and to set their faces like flint against the monstrous doctrines and acts of a rulership which have robbed them of the Germany which they loved and in which they took just pride, the Germany which had the good will, respect and admiration of the entire world.**

"I do not hesitate to state it as my solemn conviction that the more unmistakably and wholeheartedly Americans of German origin throw themselves into the struggle which this country has entered in order to rescue Germany no less than America and the rest of the world from those sinister forces that are, in President Wilson's language, the enemy of all mankind, the better they protect and serve the repute of the old German name and the true advantage of the German people.

"I measure my words. They are borne out all too emphatically by the hideous eloquence of deeds which have appalled the conscience of the civilized world. They are borne out by numberless expressions, written and spoken, of German professors employed by the State to teach its youth.

**"The burden of that teaching is that might makes right, and that the German nation has been chosen to exercise morally, mentally and actually the over-lordship of the world, and must and will accomplish that task and that destiny whatever the cost in bloodshed, misery and ruin.**

"The spirit of that teaching, in its intolerance, its mixture of sanctimoniousness and covetousness and its self-righteous assumption of a world-improving mission is closely akin to the spirit from which were bred the religious wars of the past through the long and dark years when Protestants and Catholics killed one another and devastated Europe.

"I speak in sorrow, for I am speaking of the country of my origin and I have not forgotten what I owe to it.

"I speak in bitter disappointment, for I am thinking of the Germany of former days, the Germany which has contributed its full share to the store of the world's imperishable assets, and which in not a few fields of human endeavor and achievement held the leading place among the nations of the earth.

"And I speak in the firm faith that, after its people shall have shaken off and made atonement for the dreadful spell which an evil fate has cast upon them, that former Germany is bound to arise again, and in due course of time will again deserve and attain the goodwill and the high respect of the world and the affectionate loyalty of all those of German blood in foreign lands.

**"But I know that neither Germany nor this country nor the rest of the world can return to happiness and peace and fruitful labor until it shall have been made manifest, bitterly and unmistakably manifest, to the rulers who bear the blood-guilt for this wanton war and to their misinformed and misguided peoples that the spirit which unchained it cannot prevail, that the hateful doctrines and methods in pursuance of which and in compliance with which it is conducted are rejected with abhorrence by the civilized world, and that the overweening ambitions which it was meant to serve can never be achieved.**

**"The fight for civilization which we all fondly believed had been won many years ago must be fought over again. In this sacred struggle it is now our privilege to take no mean part, and our glory to bring sacrifices.**

"\* \* \* Our one and supreme job, the one purpose to which all others must give way, is to bring this war to a successful conclusion.

"One of the means toward that end is to make the Liberty Loan a veritable triumph, an overwhelming expression of our gigantic economic strength.

"To accomplish that, let each one of us feel himself personally responsible; let each one of us work as if our life depended on the result. And, in a very real

sense, does not our national life and our individual life depend on the outcome of this war?

"Would life be tolerable if the power of Prussianism, run mad and murderous, held the world by the throat, if the primacy of the earth belonged to a government steeped in the doctrines of a barbarous past and supported by a ruling cast which preaches the deification of sheer might, which despises liberty, hates democracy and would destroy both if it could?

"To that spirit and to those doctrines, we, citizens of America and servants, as such, of humanity, will oppose our solemn and unshakable resolution 'to make the world safe for democracy,' and we will say, with a clear conscience, in the noble words which more than five hundred years ago were uttered by the Parliament of Scotland:

**"'It is not for glory, or for riches, or for honor that we fight, but for liberty alone, which no good man loses but with his life.'"**

### MISSISSIPPI'S BIG FOOD PRODUCTION.

**What the South Can Do Is Shown by What This State Has Done.**

Jackson, Miss., July 21—[Special.]—Mississippi will not only produce the greatest food crops this year in the history of the State, but will preserve hundreds of thousands of gallons of fruit and vegetables for winter use.

The corn yield of the State is estimated at 100,000,000 bushels, as beneficial rains have fallen in all parts of the State within the past few weeks. This will surpass all records. The cotton yield, with its large value as food, through cottonseed meal, cake, hulls and oil, is expected to run past 1,000,000 bales.

In practically every acre of corn, either velvet or soy beans or cowpeas are planted, and the yield from these legumes will be unprecedented, running well into the hundreds of millions of bushels.

Soy bean meal makes excellent biscuits and cakes, the beans, parched and ground, make a coffee substitute that can hardly be told from the real thing, and the oil from the beans is used for about every purpose cottonseed or peanut oil will serve, so Mississippi has a food crop for humans never before grown in the history of the State.

Velvet beans make ground for livestock that may safely be fed without a grain ration, thus releasing all grain for human consumption. Mills for the manufacture of this feed are going up in every county of the State.

Every canning factory in the State is running full time, and homes have canned the greatest amount of fruits and vegetables in history. Upward of 10,000 members of girls' and women's canning clubs have worked all summer under expert direction in conserving the surplus of foodstuffs, and this work will continue well into the fall.

Mississippi set out this spring to feed herself. She will do that and more. Already carloads of potatoes, honey, chickens, hogs, cattle and sheep are leaving the State for other less fortunate sections, and the chief crops are not yet harvested.

Indications are that in 1917 the State will have the best year in all its long history.

### Large Output of Arkansas Zinc.

Yellville, Ark., July 18—[Special.]—In a report just published by J. H. Hand, Special Agent of the State Bureau of Mines, covering the production of the North Arkansas zinc and lead field for the first six months of the current year, the production is shown to have made a gain of 33½ per cent. over the same months last year. The grand total was 24,362,000 pounds. All of this was zinc, except 510,000 pounds, which was lead. The total production of last year was slightly over 36,000,000 pounds. The production by counties is as follows: Marion county, 10,461,000; Searcy county, 6,278,000; Boone county, 3,547,000; Newton county, 2,536,000; miscellaneous, 1,030,000.

### India Wants American Products.

JOTI PARSHAD RANGI LULL & Co., Delhi, India.

We want to represent American manufacturers, especially those offering piece goods and sundries.

# More Ships and Less Squabbling Will Be the Order of the Day

[Special Correspondence Manufacturers Record.]

Washington, D. C., July 24.

The Gordian knot in the prolonged shipbuilding controversy was promptly cut when President Wilson today accepted the resignation of General Goethals as manager of the Emergency Fleet Corporation and suggested that Chairman Denman of the Shipping Board "take the same disinterested and self-forgetting course" as that adopted by Goethals to clear the way for harmonious action in the future.

Chairman Denman promptly acted upon the President's suggestion by tendering his resignation, which was accepted. The President also accepted the resignation of Capt. J. B. White, one of the members of the Shipping Board. Captain White's resignation had been handed in three weeks ago on account of ill-health, but action had been held in abeyance pending the adjustment of the situation that developed later, and which was brought to its conclusion today in the manner indicated.

Edward N. Hurley of Chicago has been selected by President Wilson to succeed Mr. Denman as chairman of the Shipping Board. Goethals will be succeeded by Rear-Admiral Capps, U. S. Navy. To the vacancy caused by the resignation of Captain White the President has appointed Bainbridge Colby of New York.

Mr. Hurley, a successful manufacturer, was until recently the Chairman of the Federal Trade Commission. In that position he won the confidence of the public and the business world, who feel that he can be depended upon to push the shipbuilding program to a successful conclusion. Rear-Admiral Capps is one of the most experienced naval constructors in the Navy. Mr. Colby is a Progressive, who worked with the President's party at the last election.

The letters of the President both to Goethals and to Denman were cordial in the extreme. There was no discussion of the differences. Tributes were paid to the acknowledged merits and ability of both men. Incidentally, it developed in the course of these letters that President Wilson has taken the position that the chairman of the Shipping Board, who is also president of the Emergency Fleet Corporation, is the official who is to have charge of the whole ship program.

This is significant in the importance of its bearing on the choice of Mr. Denman's successor. It means that Mr. Hurley is to be in charge of the biggest war job in the United States—that of replacing tonnage lost through submarine depredations by the construction of new American ships to carry food and supplies to American troops in France and to the Allies. Mr. Hurley's statement in accepting the post recognized the spirit in which he was appointed, and in its simplicity and directness is characteristic of one who is a man of action rather than of words:

I appreciate the importance of the task which the President entrusted to me. We must build ships, not talk about them. American labor, the most intelligent and skilled in the world, can turn out ships in record-breaking time, and we are going to buckle down and get busy.

The appointment of Mr. Hurley, whose record as chairman of the Federal Trade Commission furnishes a basis for public confidence, has relieved uncertainty in the shipbuilding world. As further indication of the faith President Wilson has in Mr. Hurley's ability there may be cited his appointment as a member of the War Council of the Red Cross, which organization he aided in reorganizing, and his later appointment to the Export Control Board.

Rear-Admiral Capps will apply his demonstrated abilities as one of the best constructors of the Navy to the supervision of all construction work involved in the enormous shipbuilding program. Matters of policy will be decided by Mr. Hurley as chairman of the Shipping Board and president of the Emergency Fleet Corporation, with the co-operation of the associate members. Mr. Hurley's declared policy of "ships, not talk," indicates with sufficient clearness that he is for the building of both wooden and steel ships in the greatest possible number and at the greatest possible speed.

The sudden climax to the long controversy between

Goethals and Denman took official circles by surprise. It doubtless was the personal nature of the controversy that led the President to adopt the course of cleaning the boards in order to give the country a new deal. Thus, he avoided saying who was right or wrong in the controversy over steel prices and other matters by accepting Goethals' offer to retire in the interest of harmony in the spirit in which it was tendered and suggesting a like commendable course on the part of Denman.

Denman sent his resignation to the President as soon as the letter of suggestion was received. The White resignation was already in.

Not only Goethals, but all his friends were well satisfied with the manner in which the President has solved the problem. Goethals is an admirer of Hurley, who is expected to keep the present organization of the Emergency Fleet Corporation intact. It is also expected that Hurley will push the construction of wooden and steel ships as rapidly as possible, gauging the number of each by the facilities available for the construction of each class.

## Why One Shipyard Was Not Built.

Tampa, Fla., July 21.

Editor Manufacturers Record:

Your recent inquiry about the status of my plans as to establishing shipyards received.

After receiving and examining the plans of the Ferris ship and the Government's withdrawal of the only feasible plan to build this design of ship on, I concluded that "safety first" demanded that I steer clear of any contracts. Hence no shipyard is being established by me at this time, although I hope yet, if the emergency for ships continues, to be able to do something along this line.

W. D. DAVIS.

## NEW SHIPBUILDING PLANTS AT PASCAGOULA.

### Three Companies in Various Stages of Construction Work, With Fourth in Prospect.

Pascagoula, Miss., July 21.—[Special].—Information was received here today that the Huie-Hodge Lumber Co. of Hodge, La., having secured a contract from the Emergency Fleet Corporation to build six ships, will take over the site in Moss Point, Miss., upon which they hold an option. This site is on Beardsley Lake, and is the same site upon which Terry & Britain held an option before they departed for Savannah, Ga. It borders on the Escatawpa River, three-quarters of a mile from the point where it debouches into the Pascagoula, one mile west from the line of the Alabama & Mississippi Railroad, and is within one-half a mile of sawmills of the L. N. Dantzer Lumber Co. and other mills at Moss Point. The tract contains approximately 40 acres, and is touched by the Pascagoula Street Rail & Electric Power car line as it traverses Moss Point.

The Dierks-Blodgett Company, now building a shipyard in the city of Pascagoula one-quarter mile north of the Louisville & Nashville Railroad bridge, is making ready to put in four sets of ways. Creosote piling, machinery, etc., is being placed upon the ground and machine shops and modelling-rooms are being built. This company's site is 750 feet front on the Pascagoula River by 1200 feet deep, and it will cut a canal 1000 feet long by 125 feet wide and 16 feet deep through this property as a place for ships when launched. The dredging will be done by the United States dredgeboat Pascagoula.

At the Henry Piaggio Shipbuilding Co. yards the work of putting in six sets of ways is rapidly progressing. Piling for the foundations of two sets of ways have been driven, and the work of the other four sets will be completed as rapidly as the material can

be placed on the ground. Laying the keel for the first vessel will begin within the next ten days. This will be a five-masted barkentine, 301 feet in length, 48 feet beam, and 14 feet light draft, 24 feet loaded. She will have two 200-horse-power Deisel or semi-Deisel engines for auxiliary power. This vessel will be named "The City of Pascagoula," and if she be used in carrying food supplies to the allies, which is probable, the name will be a most appropriate one, as the name Pascagoula was given to that tribe of Indians by the Biloxi Indians and means "bread people" or "the people who have bread." "The City of Pascagoula" will be the largest vessel ever built in this city and the first to have that name.

A telegram received Friday from Kelly-Atkinson Company of Chicago stated that they will be here during the early part of next week to take over their option on a site for a shipyard.

## Shipbuilding Stimulates Growth of Orange, Texas.

In discussing with a representative of the MANUFACTURERS RECORD the rapid growth of Orange, Tex., as a result of its activities in shipbuilding, President F. W. Hustmyre of the Board of Trade said that in the 14 months since the establishment of the first shipyard in Orange the city has shown a wonderful expansion in every line of activity. The population has advanced from 9250 May 1, 1916, to at least 16,000 July 1, 1917, or nearly double. Bank deposits during the yearly period from May 1, 1916, have advanced from \$1,092,232 to \$1,735,371, an increase of \$661,137. In the fiscal periods 1915-16 and 1916-17 building permits advanced from \$105,000 to \$650,000, while in the same period foreign lumber shipments increased from 8,485,373 feet to 21,064,189 feet and coastwise lumber shipments from 1,338,542 to 2,943,014.

In last week's issue of the MANUFACTURERS RECORD reference was made to the fact that there are now five shipbuilding plants in active operation in Orange. These plants have at present under contract a total of 54 vessels, and 15 are now under construction. Keels were laid last week for five new vessels. All of these plants are being laid out on a permanent basis. The various buildings and other structural work are of a substantial character, those behind them having gone into the wooden shipbuilding business with the belief that there would be a steady demand for such vessels for years to come.

The development of these plants brought quick influx of a large volume of labor as reflected by the big increase in population, and these laborers came in so rapidly that they were compelled to place several families in a house and also to provide tents for the overflow. Recently, however, 110 buildings for employees have been erected on the island where the shipyards are located. These buildings are equipped with electric lights and modern conveniences, and are furnished with artesian water.

All the men are getting splendid wages, and at one shipbuilding plant alone it is said that the weekly payroll amounts to \$14,200.

There is not a vacant building, business or residential, within the city, and to meet the rapidly-increasing demands for homes and business structures a number of new ones are now being erected.

The people of Orange expect to see a still broader development of the shipbuilding industry, and it still has available for additional plants 12 miles of waterfront with a depth of 26 feet to the Gulf.

An interesting feature of the plants that have already been established is that out of the five, four of them were backed up by local capital.

## Building Wooden Ships at Wilmington—New Yards to Be Established.

Wilmington, N. C., July 21.

Editor Manufacturers Record:

After investigating the advantages of other South Atlantic ports for shipbuilding, Capt. J. F. Cushman of Haddon Heights, N. J., and Capt. Geo. W. McKown of Philadelphia recently decided upon Wilmington as a good location for the construction of wooden vessels. For the present they have a contract for one ship, but



the first  
This will  
48 feet  
She will  
eisel en-  
named  
in carry-  
able, the  
he name  
s by the  
"the peo-  
ula" will  
the first  
Atkinson  
here dur-  
their op-

are planning to build several others as soon as this is completed.

Wilmington offers unusual advantages for wooden shipbuilding. There are a number of well-located sites on deep water convenient to the city; abundance of ship timber is near at hand and can be secured at reasonable cost. The railroad facilities are ample, labor is available, and general conditions are favorable for shipbuilding at this port. Satisfactory progress is being made on two four-masted auxiliary schooners of 1530 tons gross register being constructed here by the Wilmington Iron Works.

H. B. BRANCH,  
Secretary Wilmington Chamber of Commerce.

### New Southern Yards This Week.

Regarding its new shipbuilding plant, recently referred to several times, the Tampa (Fla.) Shipbuilding & Engineering Co. advises the MANUFACTURERS RECORD that the investment will amount to more than \$1,000,000. This corporation succeeded the Tampa Foundry & Machine Co., and is building steel vessels, dredges and phosphate-mining machinery. Its plant includes a machine-shop, foundry and boiler-shop, together with shipyards on the Ybor estuary, where it has just completed another machine-shop, foundry, boiler-shop and power-house. In the near future the management expects to erect another machine-shop, a pipe-bending shop, a joiner-shop and a sawmill, the buildings to be of reinforced-concrete construction, similar to the main shop just completed. Construction is progressing on the company's contract to build one of two ships for the Cunard Steamship Co., and within a few weeks the keel of the second vessel will be laid. These vessels will be of twin-screw cargo type, 3500 dead weight tons. Upon the completion of all the improvements these yards will have a capacity for constructing eight ships at one time, and of any tonnage up to 8000.

Charter has been granted to the Beaumont (Texas) Shipbuilding & Drydock Co., with \$300,000 capital, and the incorporators are Walter J. Crawford of Beaumont, B. F. Bonne and Geo. Howard of Houston, S. A. Megath of New York and associates. This company was recently mentioned as organized with J. W. Link, president, and C. O. Yoakum, vice-president and general manager. It will construct a shipbuilding plant on Island Park, and its plans include 250x60-foot mill building and mold loft; 40x25-foot blacksmith and repair shop; 20x20-foot paint-storage building; 40x30-foot oakum-storage house; 40x25-foot power-house; 100x50-foot warehouse for heavy machinery and other materials. Ships up to 4000 tons will be built of long-leaf yellow pine for the company's own use and for lumber manufacturers interested in its management. Government ships of 3500 tons will be built, and within a few months it is planned to add a drydock.

The Chamber of Commerce, J. F. Warren, secretary, Apalachicola, Fla., advises the MANUFACTURERS RECORD that a shipbuilding corporation has been organized with \$50,000 capital to build yards at Apalachicola, \$29,000 having been subscribed at the initial meeting. This company expects to build vessels up to 1000 tons, and after the yard has begun operations it is the purpose to ask the Government to deepen the present channel, now 12 feet deep.

Contract for constructing eight yellow-pine ships for the Government has been awarded to the Henry Smith & Sons Co. of Baltimore, and this corporation will construct a shipbuilding plant on Curtis Creek, near the city. A 10-acre site has been secured, and preparations are now being made to build the necessary facilities for constructing wooden hulls, as only this portion of the ships is to be built. It is expected that this plant will launch the first hull within eight months, and thereafter launch one hull each week. Probably \$3,000,000 will be expended for the purchase of materials and the employment of workmen for the construction of these Government vessels, besides a large amount of capital for the shipyard and its facilities.

The Chesapeake Shipbuilding Co., Baltimore, Md., has been incorporated with \$100,000 capital by Sheldon H. Tolles, Kernode F. Gill, James H. Foster, Thomas H. Jones and Roger C. Hyatt, all of Cleveland, Ohio. Mr. Tolles wires the MANUFACTURERS RECORD that the new corporation's plans are not sufficiently developed to give information.

R. C. Horne, Jr., and W. E. Richardson of Beaufort,

S. C., and Charlton G. Ogburn of Savannah, Ga., have incorporated the American Shipbuilding & Dock Corporation, and plan to construct a shipbuilding plant at Beaufort. This new company is capitalized at \$220,000.

A 1079x1079-foot site on East Pascagoula River, Pascagoula, Miss., has been secured by the Kelly-Atkinson Construction Co. of Chicago, which was recently mentioned as having secured an option on river frontage. This company will construct a shipbuilding plant on the river.

The Fernandina (Fla.) Shipbuilding & Drydock Co. has been organized with a capitalization of \$1,000,000, and proposes to construct a plant for shipbuilding. It has purchased waterfront property for a site.

Report states that the Sabine-Neches Shipbuilding Co., Orange, Tex., has been organized to construct a shipbuilding plant.

Contract for building 12 Government ships has been awarded to the National Shipbuilding Corporation, Orange, Tex. Each vessel will be 300 feet long by 47 feet wide, with a draft of 24 feet. The contract was signed several weeks ago, but a definite announcement was deferred until now. The company will build these ships complete, including the installation of engines, and last week it awarded a contract for the machinery which will be installed.

Construction has begun for the shipbuilding plant which the Howard E. Crook Company, Baltimore, will establish on the waterfront in connection with utilizing the marine department of the McLean Contracting Co. Plans have been decided for the construction of six marine ways, and probably additional ways will be built in the future. Several corrugated-iron buildings will be constructed at present, one of these to be for a machine shop. This company was recently mentioned as having increased capitalization from \$120,000 to \$250,000 for the purpose of providing shipyards, beginning work with a Government contract for six wooden hulls. Its shipyard site includes a 900-foot waterfront, and in future it is the intention to provide facilities for constructing steel vessels.

### The Country Needs to Know the Truth, That the Truth May Make Us Free.

Washington, D. C., July 21.

Editor Manufacturers Record:

The various patriotic and anti-German articles you publish from week to week as occasion unfortunately still requires, the fruit of your able pen and extracts from others, are unquestionably of a wide scope in your effort to enlighten many who are still in the dark. As a case in point I will say that an acquaintance of mine informed me the other day that for the life of him he did not know why we were at war. I replied that he had better read the MANUFACTURERS RECORD if he did not get sufficient tangible evidences from local papers in his city.

The subject of this letter is therefore to make a suggestion, to wit, that you gather the many valuable articles you have published in the MANUFACTURERS RECORD the last three months into a booklet form, with a suitable title, say, "Light for the Blind," and place it on sale at a price within the reach of all and for the benefit of the blind or orphans.

I am aware that there are now many booklets of this type out, but they are most of them written in a class, whereas if collected and edited by you they would do a lot of good to the cause.

I have been in the habit of cutting many such articles out and joining them with other periodical extracts to three already ponderous volumes, which my wife has been patiently preparing for the last three years while awaiting for peace with VICTORY. I am, however, averse to mutilating the MANUFACTURERS RECORD, and, besides, I find that since we are at war the press has added greater freedom of expression on the horrors and barbarism of the whole Teutonic breed, as, for example, the magnificent article in your issue of the 19th, "Overstrained Sentiment," by the Virginia Pilot, quoting the closing remarks that "Germany must be conquered, and with it all Germans in Germany and elsewhere who do the will of the German autocrats," etc.

And, again, in your splendid article "If" of the 12th inst., in which you quote your letter to Secretary McAdoo in which you disagreed with his statement

"that we do not fight the German people," and, indeed, the President's expressions of the same tenor as expressed in his memorable war address. Hence I fully believe with you that the time has come when the people of this country should be taught that we fight not only the militarism of Prussia, but every man and woman in Germany and elsewhere who is giving the moral support to Germany's fight for world domination, for everyone is guilty of being a co-partner in all the vile crimes of which Germany has been guilty of.

My suggestion, therefore, is based on the fact that this country is still in great need of a strong propaganda, not of the soft-voiced kind, but of the most radical form, based, however, on facts, no more, but no less.

Will you, therefore, give your consideration to the above suggestion? Should you deem proper to give consideration to it, I beg that you may permit me to contribute a modest sum of \$100 toward the expense, and I have no doubt that there are many loyal persons who would consider themselves privileged to join me, especially if they were to know that Mr. Edmonds would edit the booklet.

A. F. LUCAS.

[While the editor of the MANUFACTURERS RECORD thoroughly appreciates the suggestion and the offer made by Mr. Lucas, it is not at the moment feasible for us to undertake the publication of the pamphlet proposed.

If the pressure of work under which this office is at present being operated should in the next few weeks be materially lessened so as to give a moment's breathing spell, we might then be able to consider the suggestion made by Mr. Lucas.

The letter from Mr. Lucas is published as other letters of the same kind, not from any personal pride whatever, but from a profound sense of the responsibility to give to our readers the views of those who so strongly endorse the position which the MANUFACTURERS RECORD for the last three years has taken in regard to this world war, and to the crimes of Germany burnt with the fires of the lower world into human history.—Editor MANUFACTURERS RECORD.]

### Some Texas and Florida Crop Conditions.

JAMES R. MURPHY, President Florida Farms and Homes, Inc., Palatka, Fla.

In line with your very admirable article on food production in your issue of July 12 I enclose a letter received by me from Texas, which indicates a material reduction in food crops this year in that State. While the increase in acreage in Florida has been substantial, the early drought damaged the corn crop here, and further damage is being done in some sections by heavy rains, which cause the corn to fire before maturity. Where this has happened the crop is now being cut for fodder.

The campaign for increased food production and conservation must be vigorously prosecuted.

The Texas letter enclosed by Mr. Murphy was from a business man at Yoakum, who, among other things, said:

"I am writing you to know what Irish potatoes will be worth in carload lots f. o. b. Yoakum, Tex. You might see what it would come to by water to Galveston and then by rail to Yoakum. Also please give me prices of corn in car lots. We can handle 50 carloads.

"Texas is almost a failure in all crop lines this year. Seventy-five per cent. of the corn that was big enough to cut has been cut down and shocked or siloed. I give you the names of parties to write to if you have the commodities: W. A. Hickey, Yoakum, Tex.; C. F. Steves, Runge, Tex.; John Wolf, Nordheim, Tex.; W. M. Schmidt, Yoakum, Tex.; R. F. D. No. 1; M. F. Mueller, Yorktown, Tex.; John Mueller, Yorktown, Tex.; Bill Holzapfel, Cuero, Tex.

"If you have anything else along the food line in the way of fruits, syrup and sugar, quote them, and tell them that I wrote you and asked you to give them information. I have given you names of the best men in South Texas, who are members of the Farmers' Union. I hope we may get up a co-operative movement among the farmers for exchange of product that will prove beneficial and profitable to all of us. I have never seen Texas as dry as it is this year.

# Concrete Ships Proposed to Combat Submarine Menace

CONSTRUCTION ENGINEERS WORK OUT PLANS FOR BOATS OF REINFORCED CONCRETE THAT ARE CLAIMED TO BE IMMUNE AGAINST TORPEDO ATTACKS.

Ship concrete construction has been proposed as a means of at least partially meeting the present urgent demands for more boats to carry supplies from America to the Allied nations and to the American troops, who in increasing numbers will join the armies in France and elsewhere on the fighting line.

A number of engineers are working on plans for concrete boats. A Boston expert construction engineer has recently presented a plan, which as described in the Boston Evening Record is intended to be proof against destruction by submarines. "My plan," says this expert, "makes little if any change in the outward appearance of our modern steel ship, except that the structural part of the ship is of a specially prepared emulsified concrete reinforced with a fabricated network of steel rods that bonds the ship together in every part, giving great strength and making the structure one continuous monolith. All decks, bulkheads, partitions, etc., are interwoven together in one continuous mass of steel and concrete. The ship has two hulls and a double bottom; the double hull runs to above the water line all around the ship. There is a space of 3 feet between the outer and inner hull which is divided every 12 feet, making a continuous number of watertight compartments 3x12 feet girding every part of the ship to above the water line. In the center of this three-foot space is a system of fabricated steel rods looking somewhat like a heavy wire fence, the purpose of which will be explained later. This space between the double hulls and double bottom is not wasted, but being watertight, is used as storage tanks for carrying oil cargoes and for storing fuel for the ship's engines, the vessel being driven by oil engines, requiring a much smaller crew than a steam-driven vessel and giving more space for freight.

"The designs and methods of fabricating the steel reinforcing rods is such as to make a ship strong enough to resist the heaviest sort of a gale without straining herself, yet no attempt is made in this plan to build the outer hull heavy enough to resist the explosion of a torpedo, so let us suppose such a ship is struck by a torpedo fired from an enemy submarine; the force of the explosion is so great that a hole two or three feet in diameter may be shattered in the outer hull, and now appears the use for the fabricated rods (or strong wire fence) inside the space between the two hulls.

"These rods work on the same principle as Mr. Maxim's gun silencer; they dissipate, or in other words break up the force of the explosion, at the same time they protect the walls of the inner hull from being damaged by flying pieces of the concrete; thus a section 3x12 feet is damaged and its cargo of oil is thrown against the force of the explosion, but this of itself helps to cool the hot gases caused by the explosion; each 3x12-foot section is vented at the upper deck with a hatch that opens outward to let the explosive gases escape. The torpedo has now done its worst, and the ship has lost a few hundred gallons, maybe, of fuel oil, but the damage can readily be repaired in a few hours on arrival at her destination, or even while at sea, if necessary, as concrete will set in water without decreasing its strength.

"It will also be seen that if a vessel of this kind should be damaged by collision or by striking a rock or an iceberg, only her outer hull could be damaged, while her freight and passengers are carried to their destination in safety. A few of the items to recommend such a vessel are:

"First—A stronger and more durable seagoing vessel at less cost.

"Second—Can be built in one-half the time required for a wood or steel vessel.

"Third—An absolutely fireproof structure.

"Fourth—A vessel practically free from vibration, greatly adding to life of machinery and comfort of passengers.

"Fifth—A saving in upkeep; the hull, all outside and exposed surfaces can be of white cement, effecting a large saving in painting, etc.

"Sixth—The attainment of graceful lines and good design at no added cost, owing to the flexibility of the material while in its plastic state.

"Seventh—A powerfully strong hull, with an outer surface as even and smooth as glass and proof against barnacles and corrosion.

"Eighth—The arrangement of a series of watertight compartments that will make the vessel practically unsinkable."

Mr. Herbert M. Knight of New York is also an engineer who is interested in designing concrete vessels to meet the present American crisis. Mr. Knight proposes a vessel of unit concrete construction, and in a letter to the MANUFACTURERS RECORD he states he is the inventor of a system consisting of the combination of a multiple of pre-cast slabs, united by a positive jointing means. Tests, he states, made have demonstrated the strength and absolute water-tightness of the construction.

The advantages of a satisfactory concrete boat over either steel or wooden construction are stated to be the speed with which they can be constructed, the much cheaper cost and the fact that they can be built largely by machinery and with unskilled labor, eliminating high-priced and trained workmen. By the system of unit concrete construction hereby suggested, after the construction of a single set of forms, hundreds of units, and, therefore, many vessels, can be built from the same set, resulting in cheap, uniform and rapid output.

Mr. Knight has presented his proposed plan before the United States Shipping Board, and has asked that an opportunity be given for a demonstration as to the value and practicability of his plan.

"In the type of concrete vessel which I have designed," said Mr. Knight, "all of the longitudinal stresses are met and cared for by a system of internal trusses which run continuously from stem to stern, the side-plating of pre-cast slabs not being called upon to carry any of these stresses. These internal trusses constitute a skeleton frame of reinforced concrete, so designed and disposed as to give rigidity and the necessary strength, without excessive weight, the size and thickness of the pre-cast slabs and the location and dimensions of the various truss members being carefully adjusted so that the weakest point of the slabs shall come at the strongest point of the internal skeleton framing. All of the stresses in the upper structure are cared for by the bilge girders, and all of those in the lower by the reinforced concrete keel, which, together with the bilge girders, is poured upon and after the pre-cast slabs have been placed and joined together upon the launching ways. In other words, the interior framing is the strength-giving, stress-resisting portion of the structure, the pre-cast slabs constituting an outer cofferdam, surrounding and attached to the interior skeleton framing. In these regards my design differs from the usual steel and wooden vessel, in that in these latter most, if not all, of the longitudinal stresses are borne by the outer plating of wood or steel, the ribs or stanchions to which this material is attached, not being adapted to resisting in themselves strains in a fore-and-aft direction. I do not limit myself to the use of concrete exclusively, as an all-concrete structure would be excessively heavy, but between the various members a grillage of beams is placed to assist in carrying the external pressures on slabs to the reinforced concrete framing, thus giving strength with lightness, but not interfering with the rigidity of the skeleton structure. The amount or weight of this steel, however, is comparatively small, and the arrangement quite simple, consisting in the use of plain standard shapes, with little work thereon. In the vessel which I have designed, and drawings of which have been made, only about 400 tons of structural shapes will be required.

"This vessel has been designed of the following dimensions: 326 feet b. p., 45-foot beam, 22½ feet loaded draft. Such a vessel will contain 1250 cubic yards of concrete and 400 tons of structural material, and will have a displacement of about 3050 tons light and a

carrying capacity of about 4230 tons. I have made calculations based upon drawings, showing that the structure as designed is sufficiently strong to meet the conditions which will be imposed.

"The reinforced pre-cast slabs will be united together by a special jointing means, and will be of such mixture and so poured as to insure their absolute imperviousness. I have made experiments and tests, and have demonstrated the resistance of pre-cast slabs made after my methods to moisture and extreme atmospheric conditions. The special type of joint which I use between slabs and between slabs and internal skeleton structure is one which unites the adjacent members, and at the same time introduces a bulkhead, preventing a continuous or straight joint, thereby aiding in making the structure watertight, that is, while the internal skeleton is poured around the plating, and after its erection in position, water-tightness and strength are not dependent upon the adhesion of the various concrete faces.

"After long and careful study of the various elements in the problem I am convinced not only of the practicability of the use of such a system, but of its superior advantages at this time. As I mentioned in my earlier communication, there are four main reasons why such a system should be tried and used at the present, viz., relative cheapness, as a concrete vessel can be constructed by this system for a much lower figure than either a wooden or steel craft; rapidity of construction, as it would be possible to build the slabs at more than one location, shipping them to the point of assembly, where they could be quickly assembled and receive the interior skeleton framing; non-interference with industrial conditions, as, because of the small number of skilled workmen, no other industries would have to be disorganized in order that this industry might take precedence, and an immediate and quick solution of the present maritime conditions, as it would be possible, if immediate and favorable action were taken hereon, to have vessels fully equipped in a shorter time than by either of the means now being employed."

## Florence Seeks to Have Lesser Nitrate Plant Located at Muscle Shoals.

The Florence (Ala.) Chamber of Commerce is moving to secure the new proposed \$4,000,000 steam or coal-operated nitrate plant. While the Interdepartmental Nitrate Board has decided not to establish a water-power-operated nitrate plant at the present time, and probably not until after the war is over, the argument is advanced that Florence is the most advantageous situation as a site for the lesser or experimental plant. It has been regarded as highly probable that the \$20,000,000 nitrate plant to be operated by hydro-electricity would be located at Muscle Shoals. Many of the same advantages which were urged in behalf of the hydro-electric plant at that site are presented as reasons why the experimental plant should now be located at this point.

Among the arguments in behalf of Florence are that coal from nearby mines may be had at as low a price as from any mine in America, and without interfering with mines that are already overtaxed in producing coal for war-material industries. There are great bluffs of limestone at Muscle Shoals ready to be used at once in making substantial concrete buildings or in stone construction work, and with no hauling to be done actual construction could be started at once.

There are blast furnaces making pig-iron at the foot of Muscle Shoals in Florence and Sheffield, and foundries ready to make castings as desired. Every demand for timber or wood can be supplied by nearby sawmills, and at timber-section prices.

Railroads extend from Muscle Shoals (by building about one mile of connecting track, the grading of which has already been done) to the North, South, East and West, and steamboat lines operate from the foot of Muscle Shoals to the North, and to points on the Tennessee, Ohio and Mississippi rivers, thus providing both rail and water transportation.

An abundance of labor is available, and the climatic conditions are unexcelled and will make possible no interruption in work through the winter.

It is pointed out that the American farmers are on record as being unanimously of the opinion that the Government nitrate plant should be placed at Muscle Shoals, where it will be close to phosphate supplies, that it may eventually furnish fertilizer to the farmers of the country.



# Cableways for Shipbuilding Suggested by Cable Builder

INTERESTING PROPOSITION MADE IN INTEREST OF INCREASED EFFICIENCY  
IN SHIPYARD OPERATIONS

The use of cableways in shipbuilding is suggested by Mr. E. G. Markley, secretary of the S. Flory Manufacturing Co. of Bangor, Pa., who writes the MANUFACTURERS RECORD a brief elaboration of the idea. Mounted on towers, which would operate laterally along the shipyard docks, these cableways would prove to shipbuilding, as pointed out, what the traveling crane is to the foundry or machine shop.

Accompanying the letter of Mr. Markley was a sketch of the device, from which a drawing has been made, as reproduced herewith. Mr. Markley says:

"As an item of interest at a time when many new shipbuilding corporations are equipping for the build-

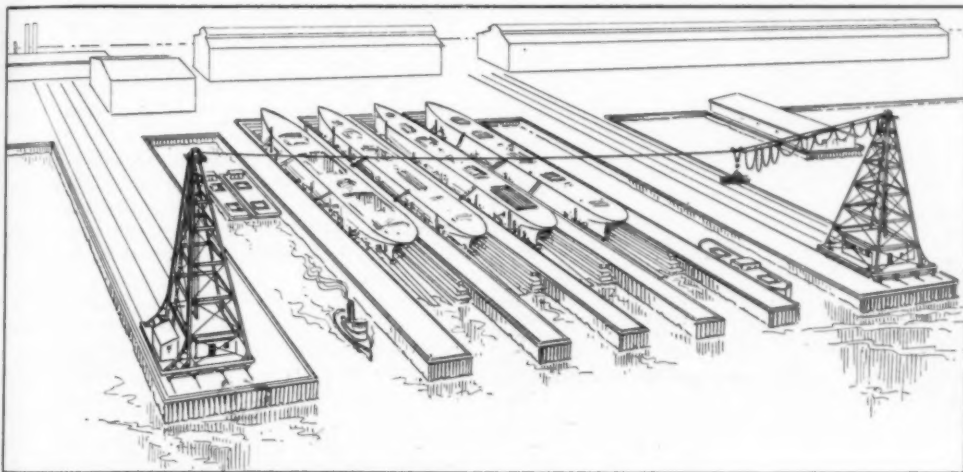
front of the cableway, cars properly placed and load taken therefrom by cableway.

"The lateral reach possible from a 75-foot tower on the dock would be about 25 feet on both sides of the cable.

"The hoist placed on the towers for operation of the load and the carriage, as well as the tower-moving apparatus, can all be electrically operated, if desired, instead of by steam.

"Each installation of necessity requires special consideration in view of the unloading of barges and launching of the new vessel, but to more clearly demonstrate my idea have attached a rough sketch. This is not exact in detail, but conveys the idea.

"The cableway idea, so far as known, has not yet



SUGGESTION FOR USE OF CABLEWAYS IN SHIPBUILDING.

ing of ships, the following suggestion may be of interest.

"The writer has noted that several new shipbuilding concerns equipping for the handling of material from barges and storage docks to the different ways are placing vertical electric hoists on their cranes with five-horse-power motors and putting about 10 lines into their fall blocks, in order to allow the handling of a load equaling several tons. This, aside from being a severe strain on the boom, makes it difficult to lower the fall block without a load. The boom must be swung around each time and the carriage racked in and out by hand, in many instances, to pick up the load, consuming much valuable time in completing a cycle from picking up to releasing load and return for another, also requiring a great amount of skill to keep the carriage on the boom from running away when loaded.

"It appeals to the writer that the introduction of cableways would be an efficient addition for any such industry. These can be constructed in lengths up to 2000 feet and more, to carry load up to 10 or 15 tons and more if required, and be used to unload material from scows as well as deliver and place material to the exact point on the ways or docks.

"The towers must be of sufficient height, either wood or steel, to allow cableway carriage and load to clear all obstructions as the work progresses—75 feet would probably be the average—and be built on tracks to move laterally on the docks. The material from barges could be unloaded and stored on the docks in front of the cableway towers and from there picked up by the cableway and delivered as required, a complete cycle not consuming more than three to six minutes, in keeping with the length of the cable.

"Two or three cableways could be so erected on the same tracks and docks when necessary, and prove to shipbuilding what the traveling crane now is to the foundry or machine shop.

"In placing machinery into the hold such cableways would be of inestimable value, as the towers could be run back, load picked up and by means of the cableway placed to exact location in the vessel, or industrial or standard-gauge railroad could be built on the dock in

been employed in this work, and as such is entirely new, but the cableway is practical in every way, and several manufacturers in the States have been furnishing them for bridge and dam building, also quarry work, for the past 30 years."

## PORT WENTWORTH TERMINAL CORPORATION.

Plans Provide \$564,000 Investment for Buildings, Water Supply, Sewers and Streets.

Details have been determined for the industrial city to be developed at Port Wentworth, Ga., several miles from Savannah, by the Port Wentworth Terminal Corporation, James Imbrie of New York, president. William Morris Imbrie & Co., New York, who have financed several large industrial enterprises located at Port Wentworth, are interested in the corporation, and have announced plans which include an expenditure of \$564,000 as follows: \$333,000 for buildings; \$113,000 for water supply; \$68,000 for streets; \$50,000 for sewer system. Charles Welford Leavitt is the engineer and the Terry & Trench Company is the contractor, both of New York.

Mr. Leavitt has completed the plans, and the actual construction will be conducted under his direction.

The improvements are planned to provide convenient and comfortable homes at a nominal expense for the workmen and families of the employees of the various enterprises established at the nearby Port Wentworth terminal, which is owned by the Savannah & Atlanta Railway. These industries include the Savannah Sugar Refining Co., with a daily capacity of 1,000,000 pounds of refined sugar; the Atlantic Pulp & Paper Corporation, a cotton compress, a lumber mill and the Terry Shipbuilding Co. (controlled by Terry & Trench), which will employ about 3500 men in building the vessels it is to construct for the Government. The plan of the city, which will have its own water supply, sewerage

system and lighting plant, calls for a white and negro village on opposite sides of the Savannah River, with separate schools, community stores, churches, parks and moving-picture theaters. All the cottages will be of frame construction, the materials being cut on the property by the Port Wentworth Lumber Co., and in the white village the dwellings will be of colonial style, of three, five, six and eight rooms. In the colored district there will be 250 two-room bungalows. Two modern hotels will also be erected in the main city for the accommodation of transients. Open-air school classes for the children will be one of the modern ideas introduced at Port Wentworth city, and landscape effects will be carried out in the general arrangement of grounds and buildings.

The city will be connected by rail with Savannah by the Savannah & Atlanta Railway, the short line to Atlanta and the Middle West, and passenger vessels will ply the river regularly between Savannah and the model village. The site of the town was formerly a large plantation, and an opportunity will be offered employees to cultivate their own gardens in the fertile soil of the adjacent fields.

The care taken to provide this model city with all the modern attributes at a lower expense to employees than could be secured otherwise is expected to go a long way toward solving the ever vital problem of adequate labor supply.

## Louisiana's Rice Crop Saved by Timely Showers.

New Orleans, La., July 21—[Special.]—The Louisiana rice crop, and incidentally that of the whole belt through Southwestern Louisiana and Southeastern Texas, is saved and its present outlook is very good. The past week, with its daily showers, has broken the back of the drouth that had caused the rice growers' gloom for the past six weeks.

John S. Dennee, rice statistician, who has been in Southwestern Louisiana, with headquarters at Crowley, the past week, gave out the statement that the rice crop was 25 per cent. improved.

The estimate of the rice crop made Thursday by Mr. Dennee was his second this season. At the time of his first the whole rice-growing section was suffering from the protracted dry spell. However, the coming of the rains has worked a decided change, and it is expected that his second estimate of a 25 per cent. betterment will go still higher.

About 80 per cent. of the rice in Louisiana and Texas is irrigated from large canals that pump their water from rivers and bayous. Because of the extreme and protracted drouth both in the coast country and in the headwaters of these streams, the water level had been lowered to such an extent as to permit an inflow of salt water so high as to make it unsuitable for the irrigation of rice. The late rains, however, have made possible the resumption of operations at the irrigation pumping stations.

The Government's preliminary estimate of the rice crop this year in 188-pound bags was 8,234,042 sacks, or 1,500,000 sacks short of 1916, and the figures from Washington on the crop since the breaking of the drouth are eagerly watched for by the rice growers.

## Heavier Loading, Also Prompt Loading, Needed Now.

T. J. SHELTON, Traffic Manager the Arkansas & Louisiana Midland Railway Co., Monroe, La.

I have read with interest in your issue of July 19 the suggestion as to the great importance at this time of shippers loading cars to their full carrying capacity. There is no question about the advisability of this, and I quite agree with you that under present conditions no one should think of allowing any car to go out without its being loaded full.

I believe that shippers and receivers are generally beginning to give attention to this question of heavier loading, although there are some shippers paying no attention to it. If everyone will co-operate during the approaching season of fall movement of crops, I firmly believe we will not witness the distressing car shortage we have had in times past. Of course, in addition to heavier loading, there must be coupled prompt loading and unloading and the prompt movement by carriers.

## Government's Great Aviation Station Under Way near Hampton Roads

[Special Correspondence Manufacturers Record.]

Newport News, Va., July 19.

The construction of the \$30,000,000 aviation testing station being built near Hampton by the United States Government is well under way, and some of the foremost flyers of the country now are testing machines there. The station, known as Langley field, after Langley, the inventor, will be one of the largest in the world, Government officials say.

than 1000 men working on the buildings under construction.

A dual railway system connecting the station with Hampton and costing \$90,000 will be completed shortly.

Back River will be spanned by a bridge 1900 feet long and 20 feet wide. This will connect the station with the city of Hampton, which is located less than two miles from the site. Fort Monroe is only a short dis-



COMBINATION LAND AND WATER BOAT WITH WHICH THE GOVERNMENT IS EXPERIMENTING. WHEELS MAY BE REPLACED BY PONTOONS WHEN FLYING OVER WATER.

The field consists of a tract of 1669 acres, and fronts for three miles on Back River. Temporary frame and canvas hangars have been erected, the field leveled and the construction of the huge brick and concrete buildings begun. The War Department paid \$290,000 for the land, and since that time has spent more than \$1,000,000 putting it in shape. There now are more

tance away, and Newport News is within 35 minutes' car ride of the school.

The school will be large enough to accommodate at least 500 pupils. Several companies of soldiers will be stationed at the school for police and guard duty.

Flying conditions here are said by experts to be 42 per cent. better than anywhere else on the Atlantic



TYPICAL GROUP OF AVIATION STUDENTS, WHO ARE RECRUITED FROM THE NATION'S FINEST YOUNG MEN.

coast, and Glen H. Curtiss says he has never seen any place so admirably adapted to all-year flying.

The passage of the new airplane appropriation will mean that activities at the station are to be rushed night and day in order that the training of the hundreds of flyers who will be sent to the European battle front may be quickly effected.

Most of the equipment used in the construction of the buildings has been on hand for months, and there now are more than a score of the latest models of flying machines in the temporary hangars. These machines are being tested every day, and persons coming up Chesapeake Bay often mistake them in the distance for huge gulls or other large birds.

The school was closed to visitors on the declaration of war with Germany, and it is impossible for even the highest Government officials to enter the buildings unless they have the proper pass or are accompanied by officials of the station.

Preparations are being made to use some of the recently assembled machines in connection with the fortifications at Fort Monroe. None of the machines have guns mounted on them as yet, so they would be of little use in the event of attack by hostile planes unless used for scouting purposes. The machines can be used in detecting submarines, as it is possible to see a great distance under water if one is high in the air. This has been proved by the picking up of mines by aeroplanes from the Atlantic coast aeronautical station located in Newport News and now used as a naval aviation training school.

The station now is a perfect beehive of activity. Hundreds of men labor from daylight to darkness on the fields, speedways and building foundations, huge trucks laden with materials and equipment are passed everywhere on the roads and large crates, bearing airplane parts, arrive on nearly every train.

Some of the permanent buildings will not be constructed in the near future, as the Government wants to begin the training of student flyers at once.

Government officials who recently visited the station are quoted as saying that it will be the largest and best-equipped aviation station in the world when completed.

The station is only one of the many forms of Government activity now under way in Hampton Roads.

### Suffolk Sets an Example in Organization of Home Guards.

Maj. M. W. Joyner, President  
Suffolk Home Guards,

Suffolk, Va., July 19.

Editor Manufacturers Record:

I note with pleasure your timely remarks about forming home guards. The time to act is at hand, and unless those who cannot do regular service in France take some interest in the matter, it will be a sad day for them and their families.

I have the honor of having raised four companies in my city, and we meet and drill once a week. A good many of my men are old military men, and in a few weeks our company will be in shape to drill with any other four companies in the State. They are composed of loyal, dependable men, men you can count on. If the time should ever come that our Germans in America should make trouble we will be on hand with the goods. They are the only people the South has any fear of trouble with, for the South has never or will ever have any more loyal friend than the colored man. You can call on him at any hour of the night and he stands ready to help his Southern white friend.

Just as soon as the Government can turn over some rifles we will be in good shape. I think our company was the first in the State to be sworn in.

I trust you will impress on the minds of the country before it is too late the necessity to come forth and join home guards and be at drill. It may be that unless more interest is shown the mayors and governors of each State will have to draft men for home duty.

I trust the time may never come when it can be said that men have to be drafted to protect their wives, daughters and property. They forget they cannot come out with arms unless they are with a regular organized company, and no man can do his duty at anything unless he is prepared. Let us do our duty, and do it quick!

M. W. JOYNER, President.



## CONSTRUCTION VIEWS OF WORK AT CAMP TAYLOR, LOUISVILLE, KY.

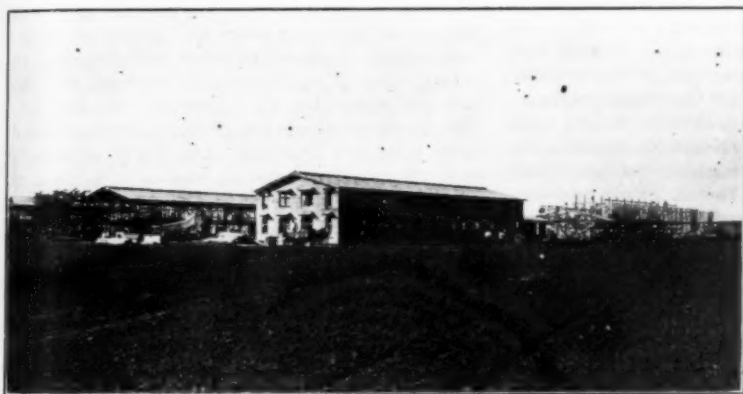
TYPICAL OF ACTIVITY AT THE VARIOUS CANTONMENTS THROUGHOUT THE COUNTRY, WHERE CITIES ARISE OVER NIGHT—1500 BUILDINGS TO A CANTONMENT, TO PROVIDE FOR POPULATIONS OF FROM 40,000 TO 50,000 EACH.



UNLOADING TRAINS OF SOUTHERN PINE LUMBER FOR CONSTRUCTION OF BUILDINGS.



DETAIL OF BUILDING CONSTRUCTION UNDER WAY.



BARRACKS QUARTERS IN VARIOUS STAGES OF CONSTRUCTION.



ADMINISTRATION BUILDINGS, HEADQUARTERS FOR CONTRACTORS AND ARMY OFFICERS ENGAGED ON WORK.

## The Nitrate Plant Situation Up to Date

[Special Correspondence Manufacturers Record.]

Washington, D. C., July 24.

Reports in circulation purporting to give the location of the nitrate plants to be established at an expenditure of \$4,000,000 as a result of the President's direction given to the Interdepartmental Nitrate Committee were stated by War Department officials today to be based on pure speculation.

One of the statements receiving publication is to the effect that in a conversation between Representative Huddleston of Alabama and Colonel Kellar, Assistant to the Chief of Engineers, the former was told that the sites of the preliminary work in the production of nitrates had been selected.

These, the statement continued, were to be in South-western Virginia. One was to be for the production of synthetic ammonia (the Haber process). That for the cyanimid process was to be located in the same section, but the two are to have no connection with each other. The statement went on to say that both were to be conducted by a large corporation by processes which it has been operating for some time, and that if the operations are successful, other plants will be established. The plants are to be operated by steam, with the question of the utilization of water-power to come up for later consideration.

Another report gave West Virginia as the State to get the two nitrate plants, with the site of the chief plant

to be on Salt River, where it was to be erected at a cost of \$3,500,000.

Both of these reports were not only pronounced by War Department officials as being without any authoritative foundation, but it was said of all others that may have appeared up to the present time that they represent merely the opinions or guesses of those who give them out, as no announcement of any kind has yet been made.

It was definitely ascertained by the MANUFACTURERS RECORD correspondent today that the processes which will be used are the cyanimid and arc processes. It is understood to be the opinion of the army engineers that the centralization of manufacture of nitrates at a great single water-power unit would militate against the turning out of sufficient quantities within a reasonable length of time.

The creation of such a unit, it is pointed out, would consume about five years, during which time this country would still be dependent upon foreign sources of supply, besides exhausting the original appropriation of \$20,000,000 made for the erection of nitrate plants.

Under the plan of the War Department as it stands today it has been decided to try out the two processes mentioned in different plants. One of these plants, it is understood, will be purely experimental, while the other is to be a permanent unit, at which one-sixth of the supply of nitrates estimated to be necessary will be manufactured. Both these experiments will be affected by the \$4,000,000 it has been determined upon to spend.

While War Department officials refused to comment

upon the significance of the elimination of water-power in the experimental processes, it is generally believed that the length of time required for the establishment of hydro-electric plants may mean their elimination as factors in the situation altogether. For some time the lack of uniformity in obtaining power during certain seasons at some of the largest hydro-electric plants in this country and Canada has been given much consideration by the engineers, both of the army and navy.

### Growth of National Banking System.

The Comptroller of the Currency reports that the fiscal year closed on June 30, 1917, witnessed extraordinary progress in the growth and development of the National Banking System. Notwithstanding the large number of consolidations of national banks with national banks, and making allowance for all liquidations for conversion into State banks, and failures (the latter being comparatively few), there were in operation in the United States on June 30, 7635 national banks, a greater number than ever before, while in resources and deposits our national banks during the past year surpassed all previous records. During the year 163 new national banks were chartered, with \$9,470,000 of capital, against 117 new charters the previous year with \$7,505,000 capital. Besides, 150 national banks increased their capital in the sum of \$25,507,490. The previous year the increases were 92 and the capital increase of existing banks was \$9,607,700. The total increase in capital arising from banks newly chartered and old banks increasing their capital was \$34,977,490; the previous year, \$17,112,700; increase more than 100 per cent.

## Peanuts and Soy Beans

IMPORTANCE TO THE SOUTH AS CASH CROP, FERTILIZER, FEED, FOOD AND OIL.

By RICHARD WOOD EDMONDS, Atlanta, Ga.

The value of peanuts and soy beans as a cash crop for the farmer as well as a stock feed and food, together with their adaptability to soil and climatic conditions, insures for them a permanent place among the food crops of the South and Southwest.

As a cash crop they probably never will be the equal of cotton when cotton is grown under the most favorable conditions. However, in the boll-weevil infested areas they furnish a good substitute for cotton, and in any section that the boll-weevil has not invaded and in which cotton still flourishes their fertilizing qualities render them a good crop to rotate with cotton. The great and growing demand of the oil mills for them insures a ready market. This demand, of course, increases with the extent of the damage done by the boll-weevil, for where cotton cannot be raised, the oil mills must depend very largely on peanuts and soy beans. Even where cotton is untouched by the boll-weevil, however, peanuts and soy beans are coming into use as supplemental to cottonseed, to enable the mills to run for the greater part of the year, thereby reducing their overhead charges. Oil-mill men, as a rule, seem slow to come to this way of thinking, but they are being driven to it by the force of circumstances. In a few mills in North and South Carolina the experiment has been tried and found to be successful.

The changes required in the machinery of the oil mills for crushing peanuts and soy beans are small. The chief difficulty seems to be teaching the men to handle the material, for these require slightly different treatment for cottonseed. This can be easily overcome, however, and the advantages gained in reducing overhead expense and in keeping the labor force organized are well worth the effort.

In some sections soy beans have a decided advantage over both cotton and peanuts. They require very little labor for planting and cultivation, and where labor is scarce this becomes a vital factor. The chief complaint I have heard made against soy beans is that the pods open when they are thoroughly ripe and "spill the beans." By the time the first pods are ripe, however, the backward ones are so nearly ripe that they will ripen on the vines after the vines are cut, and the harvesting and threshing can be done with this in view, which will save practically all the beans.

The Progressive Farmer says:

"The South is searching for a money crop to take the place of some of its cotton, or at least in addition to cotton. In this search soy beans should not be overlooked. The crop is well adapted to our soils and climate. On our thin to average lands it will probably yield more pounds of beans per acre than the same land would produce in corn. Moreover, its production would not reduce the nitrogen in the soil, as is done in the growing of corn. For our average lands it seems to have advantage over corn, oats, cowpeas or other Southern grain crops, either as a money crop or as a source of feed for livestock.

"With the coming of the cotton boll-weevil the oil mills are anxious for another crop that will yield oil. In fact, another oil-yielding crop in addition to cottonseed would be of great benefit to the oil mills by enabling them to keep their plants in operation for a larger part of the year. It may be that the cotton-oil mills would have to have different machinery, in part, for handling soy beans, but even this would not take away the advantage of another crop to prolong their operating season, for much of the plant could certainly be used alike for both kinds of seed.

"If the oil mills could get enough out of soy beans to enable them to pay around \$1 a bushel for them, which it is stated they can, there is no question that the extensive production of soy beans would be an excellent thing for both the farmers and the oil mills.

"At any rate, the soy bean is a very desirable crop for the South, as a producer of rich protein concentrate or grain and high-grade straw for roughage. We have not yet begun to appreciate its value. For feeding, 35 to 40 bushels of soy beans are probably equal to a ton of cottonseed meal. This amount of seed and

two tons of soy-bean straw or stover can be produced on two acres of land that will produce 15 to 20 bushels of corn per acre.

"There is no longer any excuse for the purchase of high-priced protein feeds for feeding livestock while soy beans can be grown the same season after a crop of oats or wheat."

Peanuts have been grown extensively in Virginia and North Carolina for many years, but until recent years by far the greatest part of the production was sold to the public in 5-cent bags, and to confectioners. A few years ago the peanut-butter industry came into being and caused a considerable increase in the production of peanuts.

Figures given by the MANUFACTURERS RECORD show what strides have been made along this line:

"The Census for 1909 showed that 869,887 acres were used for growing peanuts. The preliminary estimate for 1916 was 1,245,000 acres devoted to peanut culture, and for 1917, 2,001,000 acres. This showed an increase in peanut acreage in 1916 over 1909 of 43.1 per cent., while the 1917 acreage is more than 60 per cent. larger than that estimated for last year."

Soy-bean culture on any considerable scale is too new in this country for any similar figures to have been compiled. However, the acreage for 1917 is probably several times that for 1916, for last winter the Interstate Cottonseed Crushers' Association bought large quantities of soy beans, and through its member mills, as agents, distributed them broadcast to farmers from the Atlantic to the Pacific. Throughout this area they will be grown this year, whereas in 1916 they were not grown to any extent outside North and South Carolina. The coming season, therefore, will witness a trial on a large scale of an experiment that has proved very successful in the Carolinas.

That the market for soy bean and peanut oil and meal already exists in this country is shown by the fact that thousands of tons of both of these products are imported by this country annually. Most of the imported oil comes from France. It is of a high grade, and is used as a salad oil. Some peanut salad oil, however, is manufactured in this country. It has a distinctive, rich, nutty flavor, and is sold readily in the North, but is little known in the South. The best information that the writer can get on the subject would seem to indicate that the market for it is capable of great development.

Soy-bean oil is of a lower grade than peanut oil or cottonseed oil, but it is used for many of the same purposes. The meal of both peanuts and soy beans has a very high food value. It is not as widely known as cottonseed meal, but where it is well known it commands a considerably higher price than cottonseed meal. These various uses will be discussed more in detail further on; they are mentioned here to give some idea of the possibilities in the development of peanut and soy-bean culture, and, therefore, of the cash value to the farmer of these crops.

Both soy beans and peanuts are legumes, and, therefore, extract large quantities of nitrogen from the air. This nitrogen is stored in the beans and nuts and in the nodules on the roots. In the case of the soy beans the roots are always left in the ground, the land thus getting the benefit of the nitrogen in the nodules. In the case of the peanuts, the roots are sometimes removed with the rest of the plant. This should never be done, and by the use of proper harvesting machinery the roots, with the nodules, can be left in the ground. The peanuts do not grow on the roots, but on stems that branch out close under the surface of the ground. This plant makes a tap root which goes down much deeper than these stems, and harvesting machines are on the market which will cut this tap root below the nuts, thus leaving in the ground the nodule-bearing roots.

In the past peanuts have been grown to some extent as a grazing crop. They furnish one of the best feed for hogs. They have become too valuable, however, to be used for this purpose. Moreover, peanuts are not

as good as peanut meal. The nuts themselves, when fed to hogs, make the meat soft, whereas the meal makes it firmer and better. Both peanuts and soy beans furnish valuable hay, but the peanut hay is better, approaching alfalfa and the best clover.

The meals of both, being very rich in protein and containing some potash and phosphoric acid, are a high-grade, concentrated feed, excellent for all kinds of cattle. They contain about 50 per cent. of protein. Cattle like them and thrive on them.

Soy-bean oil, as has been said above, is very similar to cottonseed oil. Besides its use as a cooking and salad oil, to which the refined grades are put, this oil is used in making soap and paint. In writing of soy-bean oil, Mr. C. B. Williams, Chief of the Division of Agronomy of the North Carolina Experiment Station, says:

"At the present time the oil is used in this country chiefly in the manufacture of soaps, varnishes, paints, enamels, linoleums and water-proofing materials. It has entered also to some extent in the manufacture of edible salad oil and butter substituted. The untreated oil may replace linseed oil completely, with quite satisfactory results, in the manufacture of soft soaps, but it can only partially take the place of cottonseed oil in making hard soaps. This is because the soap made from soy-bean oil is of a somewhat softer nature than that made from cottonseed oil. After hydrogenation the oil has a wider field of usefulness, and may in some cases entirely replace linseed oil or other drying oils with quite satisfactory results.

"As the untreated oil is of a semi-drying nature, it may be used only when mixed with linseed oil for the manufacture of paints, varnishes and enamels. In making paints, if the proportion of soy-bean oil to the total oils present does not exceed 20 or 25 per cent., there does not seem to be any inferior qualities developed in the paint, any more than when linseed oil alone is used. In this respect the soy-bean oil is superior to cottonseed oil, as it has not been found that the latter can be used for this purpose. It is not improbable that with the use of suitable dryers soy-bean oil may in the future find more extended use for this purpose. When the oil is refined it will yield about 10 per cent. glycerine as a by-product in the manufacture of soaps. This glycerine has been found to be equal in value to that recovered from other soap-making fats, such as tallow, cottonseed oil, coconut oil, etc. It is significant of the possibilities of the use of this oil that more than \$5,000,000 worth of it was imported into the United States this year from other countries, chiefly from Asia."

Peanut oil should never compete with soy bean and cottonseed oil; it is of so much higher grade that it should be used for totally different purposes from that to which soy bean and cottonseed oils are put.

The best peanut oil is produced by pressing cold the shelled and blanched nuts. If the peanuts are cooked, as the cottonseed is, the grade of the oil is injured. Peanut oil produced by the cold-press process method needs no refining. It is simply filtered to remove the finely-crushed particles of meats that pass through the press and would cause the oil to spoil later on, and is then ready for use as a salad oil. By not being refined it retains the rich natural flavor of the nuts. It is a good laxative when used daily, and is a fine, easily-digested food. In the cold-press process three, and sometimes four, pressings are necessary to extract the whole amount of oil. The first process produces the high-grade oil, which is used for cooking and salad oil; the cake is then ground up for another pressing, the second and third producing an inferior oil. It has been suggested by the makers of the expeller, the type of press used for the cold-press process, that the cottonseed-oil mill men install enough expellers to handle all the peanuts for the first pressing only. The oil from them would be used as a salad oil, and the cake, on being re-ground, could then be mixed with the cottonseed meats; it would be cooked and pressed in the hydraulic presser, and all of the available oil remaining be removed with one pressing. By this method the high-grade oil, worth much more than cottonseed oil, could be sold for its full value instead of at a heavy loss, as would be the case if cooked and pressed with cottonseed or in the way in which cottonseed is prepared and pressed.

Both peanuts and soy beans flourish throughout the cotton belt as well as farther north than cotton will grow. Soy beans especially are very hardy. According



to the bulletin of the Connecticut Experiment Station, they have been grown successfully as far north as Connecticut. Peanuts require a rather light, sandy, well-drained soil. Soy beans are not so particular. They will grow well in almost any kind of soil in which anything else will grow. It is claimed that they will grow well on some rice fields, and, like peanuts, they will weather extremes of drought.

From the foregoing it seems safe to assume that both peanuts and soy beans are destined to take a very much more important place among the crops of the South in the future than they have done in the past.

### College Students Make Intensive Study of North Carolina County.

By S. R. WINTERS, Durham, N. C.

A 55-page bulletin, entitled "Sampson County: Economic and Social," is the first intensive study ever made of a North Carolina county. It is the product of four University of North Carolina students—S. H. Hobbs, Jr., R. F. Moseley, W. E. Matthews and J. V. Baggett—and "is an attempt to interpret the present-day forces of life in our native county, and to prepare for competent citizenship and effective public service."

"Where the county leads, where it lags, and the way out" is the phrase of Prof. E. C. Branson, a Southern sociologist, in describing the intent of the publication. It concerns the economic and social problems of a single county, and is one of seven such bulletins ever issued in the United States.

The opening chapter is descriptive of the natural resources of Sampson county. Of its total area of 590,080 acres, only 27.4 per cent. is in tillage. Corn, cotton, tobacco, potatoes and small grains are crops grown at a profit. Seventy boys produced 69 bushels of corn per acre, and 42 canning-club girls packed 20,000 tins and jars of fruits and vegetables. The profits therefrom were \$1800.

Farms under cultivation are classified with respect to area, the bulletin concluding that the small farm is the typical one. Nine hundred and seventy-six farms have between 50 and 100 acres; 1389 between 100 and 500 acres; 100 have between 500 and 1000, and 29 farms are 1000 acres in extent.

The inventory of the county establishes the fact that agriculture is the predominant industry. Ninety-nine manufacturing establishments, with a capital of \$319,483, embrace its allied industry. Soil is the basis of its wealth, ranking third of all North Carolina counties in production of corn—777,340 bushels. Its farm wealth has increased 165.50 in 10 years. Agricultural wealth is now appraised at \$9,874,250.

"Farm Conditions and Practices" is a sub-title of an analysis of characteristics of the county. Sampson led North Carolina in the quantity of swine slaughtered and sold—35,138 pounds. The 10-year increase in poultry production was 43.9 per cent., only five other counties producing a better showing.

The value of non-food crops was found to be \$1,528,380, a value created by cotton and tobacco mainly. Here the economic and social survey introduces a bit of agricultural preachment:

"Our farmers do not supply the \$1,300,000 local market demand, because (1) of excessive attention to cotton and tobacco; (2) excessive farm tenancy under the supply-merchant, crop-lien, time-credit system; (3) the lack of ready cash markets for home-raised supplies.

"Fifty-five per cent. of the total crop wealth produced in Sampson county year by year is produced in cotton and tobacco alone, and this ratio has been steadily increasing year by year. We are giving increasing attention to cotton and tobacco and decreasing attention to grain crops, hay and forage, domestic animals and livestock products."

The ultimate value of the Sampson county economic and social survey is the application of its conclusions in a correct analysis of any typical county in the South. The bulletin will be widely distributed.

### Cigarette and Cinematograph Machinery.

FERNANDEZ & CANNS, Zambrano, Bolivar, Colombia.

We want a small cinematograph, costing \$30 to \$40, for family exhibitions; also small machine, costing about \$20, for making cigarettes.

## Use of Southern Ports Urged to Relieve Terminal Congestion

ACTIVE STEPS TO MAKE GOVERNMENT AND OTHER SHIPMENTS THROUGH THE SOUTHEAST AND GULF CITIES.

As a result of an important conference held last week at the Atlanta Chamber of Commerce the Southern Ports Efficiency Commission was formed for the purpose of carrying out a plan urged by the MANUFACTURERS RECORD two years ago, viz., the utilization of Southern ports to relieve the congestion prevailing at Northern ports. There were present at the Atlanta conference representatives from a number of the leading Southern seaports on the Atlantic and Gulf coasts and also interior cities, in response to a call issued by Ivan E. Allen, president of the Atlanta Chamber of Commerce. Mell R. Wilkinson of that city was elected chairman of the commission, being authorized to appoint a committee to visit Washington and get in touch with the situation there concerning the shipment of supplies to the United States troops as well as to the allied armies in France.

The committee to Washington is as follows: Ivan E. Allen of Atlanta, chairman; George G. Crawford, president of the Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.; F. D. M. Strachan, shipbuilder, Brunswick, Ga.; W. M. Coachman, naval stores, Jacksonville, Fla., and B. F. McLeod of Charleston, S. C. They will go to the Capital immediately and work energetically for the end in view.

E. T. Lamb, president of the Atlanta, Birmingham & Atlantic Railway, was one of the principal speakers at the organization meeting, saying that the railroads were ready to co-operate with the commission and that it was no fault of theirs that shipments have not hitherto been routed to Southern ports instead of through the congested ports of the North and East. The matter of routing shipments, he explained, was left to the agents of the various governments, and the railroads themselves seldom had an opportunity to route them. He further suggested that the quickest way to get results was to get in touch with the various agents of the foreign governments in Washington.

James S. Phillips of Birmingham, traffic manager for a company which has large dealings with foreign governments, spoke along similar lines and related instances in which the agents had routed shipments through New York instead of through a Southern port nearby.

H. W. Miller, vice-president of the Southern Railway at Atlanta, was reported as saying that his company is anxious to co-operate in the advancement of the project, and it has advertised several times the storage facilities of various ports reached by its lines. It is a source of trouble to receive goods for transportation via Northern ports, where embargoes are in effect, for such shipments cause the congestion trouble. He thought that the solution of congestion difficulties would be found by shipping through Southern ports.

A steering committee was appointed as follows: J. K. Orr of Atlanta, George N. Armstrong of Savannah, F. D. Aiken of Brunswick, E. T. Lamb of Atlanta, W. C. Stanley of Atlanta, Charles Kimmick of Charleston, F. A. LeBlanc of Mobile, John W. Burr of Montgomery and Blanks Everett of Birmingham. This committee nominated an executive committee, which was elected.

Executive Committee—A. W. Carey of Birmingham, F. D. M. Strachan of Brunswick, T. C. Tipton of Jacksonville, Charles Kimmick of Charleston, George Armstrong of Savannah; S. A. LeBlanc of Mobile, C. S. Hoskins of Tampa, M. J. Sanders of New Orleans, M. M. Caskie of Montgomery and Mell R. Wilkinson of Atlanta. Mr. Wilkinson was elected chairman of the committee; Moultrie Hitt, secretary, and E. P. McBurney, vice-chairman and treasurer. All of the officers are of Atlanta.

Secretary Hitt, after the organization of the executive committee, announced that Chairman Wilkinson was empowered to assemble the necessary information and appoint the subcommittee to go to Washington and place the information about the Southern port facilities before the proper authorities, and to tender their services. He also said:

"Our plan is to assist the Government and our allies to work out the most efficient means of relieving the present congestion at Eastern ports by a full utilization

of Southern ports not only for Southern traffic, but also for the Central and Western States, which should naturally flow through Southern ports.

"It was stated that already, in anticipation of a possible trend of export trade through Southern ports the railroads have announced the publication of rates from central freight association territory on a parity with rates to Eastern ports, which recognition will be a strong argument in favor of the proposition, though it was not thought that the inland rates would be of major importance in comparison with other controlling considerations."

Those attending the conference were:

Brunswick, Ga.—Albert Smith, secretary Board of Trade; F. D. Aiken, president Brunswick Bank & Trust Co.; Benito Padrosa, exporter; E. E. Shaver, lumber; J. B. C. Blitch, agent A. B. & A. Railway; D. W. Krauss, attorney; J. B. Abrams, president Glenn Canning Co.; R. L. Phillips, insurance; W. F. Parker, Brunswick Towing Co.; B. F. Mann, merchant; Linton E. Allen, cashier Glenn County Bank, and A. J. Crovatt.

Montgomery—John W. Durr, W. M. Caskie. Jacksonville—J. C. O'Dell, Charles T. Paxon, F. C. Groover, T. C. Tipton.

Savannah—E. S. Trosdal, George F. Armstrong, Frank Wilby.

Pensacola—John E. Merritt, James S. Phillips. Birmingham—Blanks Everett, Carson Adams. Charleston—Charles Kimmick. Mobile—Stewart A. LeBlanc. Union Springs, Ala.—W. M. Blount. Macon—John M. Cutler.

Atlanta—J. T. Holleman, E. H. Cone, W. J. Lowenstein, Moultrie Hitt, Brooks Morgan, J. K. Orr, Ivan E. Allen, L. F. Chalener, W. L. Stanley, S. P. Stringfellow, E. T. Lamb, J. L. Edwards, W. E. Parker, W. B. Willingham and R. K. Rambo.

### Petroleum Output of Louisiana.

The petroleum marketed from all productive fields in Louisiana in 1916 amounted to 15,248,138 barrels, according to the United States Geological Survey. This quantity is less by 2,943,401 barrels, or 16 per cent., than the record output in 1915, but is slightly greater than the output in 1914.

The distribution and value of this output by principal divisions is shown in the following table:

PETROLEUM MARKETING IN LOUISIANA IN 1916.

(Barrels of 42 gallons each.)

	Northern Louisiana.	Coastal Louisiana.	Total.
Total quantity.....	11,821,642	3,426,496	15,248,138
Total value.....	\$12,178,262	\$2,491,512	\$14,669,774

The average price at the wells for this oil was \$1.00 a barrel for that from the Northern fields, and 73 cents a barrel for that from the coastal pools, these prices being, respectively, 41 cents and 27 cents higher than the average prices in 1915.

In all, 666 new wells were completed in Louisiana in 1916, as against 565 in 1915. Of these, 428 were oil wells, 56 were gas wells and 182, or 27 per cent., were failures.

Of 520 wells completed in the Northern districts, 324 were oil wells having an average yield of 169 barrels each the first 24 hours after completion, 55 were gas wells and 141, or 27 per cent., were failures. Of 146 wells completed in the coastal pools, 104 were oil wells averaging 1070 barrels each the first 24 hours after completion, one was a gas well and 41, an average of 2 in every 7, were failures.

### Jacksonville's Growth.

Jacksonville, Fla., July 17—[Special.]—Figures in the Building Department of the city of Jacksonville for the period extending from the big fire, May 3, 1901, to June 30, 1917, show that approximately \$44,369,987 has been spent for construction work on residences and stores, to the total number of 16,633. The city has grown from 35,000 population to 100,000.

## One Price for All?

"We Must Make the Price to the Public  
The Same as the Price to the Government."  
—PRESIDENT WILSON

### THE UNSUSPECTED SIGNIFICANCE OF THE PRESIDENT'S SUGGESTION—THE DISASTROUS EFFECT IT WOULD HAVE UPON ALL METAL PRODUCTS.

By EDWIN IRVINE HAINES, New York.

The suggestion of President Wilson in his recent address that "we must make the price to the public the same as the price to the Government" is practically a demand that there shall be no profiteering in any of the war industries, including steel, iron, copper, lead, spelter, tin, etc., and that the producers in all these industries shall make as fair prices as they do to the Government. Surely the President has not in his mind any idea beyond a moral and sentimental appeal to the patriotism and conscience of those he is addressing. It is a noble idea that no producer or manufacturer shall seek to make excess profits out of the war. In so far as products other than food are concerned, however, war economists generally have felt it expedient not to interfere too rashly with the industrial machine. They have been willing to allow the producer or the manufacturer to pile up excess profits, recovering them from him later through an excess profit tax.

If President Wilson's suggestion or request, whichever way you take it, was put into force it would undoubtedly dynamite the prosperity that is necessary to win the war. In metal circles his words are taken as a direct hint that prices have been too high, and out of all due proportion, and that the Government might be induced to interfere and reduce them.

The power of the President has been increased a hundredfold since the responsibility of war was placed on his shoulders. By common expression, "what he says goes," and the law of supply and demand, so seriously invoked by the producers of metals at this time, is considered the Government of no effect during war. As the matter stands, either the Government would have to pay prices approaching the present market, which has been the result in most cases of the law of supply and demand, or else it is to pay, as I think that it should, cost plus enough profit to continue operations of production in the largest possible volume.

If the price to the public is to be put on the latter basis there will surely follow a collapse in our present business structure that would be unfortunate, indeed. Would all contracts for future delivery have to be put down instantly, including manufactured goods, to that price? Would all the contracts on sellers' books have to be lowered to that figure? England made a maximum price on copper, lead and other commodities, above which none of her subjects could buy or sell without a permit, but in the case of England they had America to turn to, where purchases could be made at any price the necessity compelled. We have no such country to fall back upon.

I have long been convinced that the present high prices for steel, copper and other basic raw materials of a similar nature are absolutely necessary as a means to insure that these various articles shall be purchased by the people who require them most and can make the most efficient use of them. If the prices should be artificially lowered, however, the dealer would have no such sure means of picking out just to whom to deliver his product, as these low prices would encourage people to make purchases which were not absolutely necessary.

Is the great law of supply and demand to be obliterated because we are at war? Granted it should so be done for the Government, but if it also applies to the public, how is business in the country to be carried on? Is competition no longer to be the life of trade? President Wilson has brought forth many splendid democratic principles during the course of his administration, the greatest of which was his plea for the United States to take up the gauge of battle with Germany, so "that the world may be made safe for democracy," but such a measure as he now proposes is more socialistic than democratic. This is no time for experiments. There may be some commodities that are so inflated, and in which the inflations have taken place within a short length of time, that an adjustment might be accomplished without demoralizing effects. We are not treating any single article, however, but are taking com-

modities as a whole. What we are interested in above all things is in fighting the war to a successful conclusion. Anything else is not of the slightest importance, if business is demoralized the means of prosecuting the war must suffer. If prices are to be regulated, how about labor, the present price of which is largely caused by the law of supply and demand? Is labor to be adjusted by the cost of living only, and not by this law?

Where will this price fixing begin and where will it end? If the price of steel is fixed for all consumers, will a railroad equipment company, for example, be able to purchase its steel at a reduced price from the steel company, and then sell its locomotives or cars to railroads at the high prices previously prevailing, or will the price of locomotives, too, be fixed? Who will have the omniscience to fix the prices and determine who shall get the goods? Will price fixing be confined only to those concerns who sell directly to the Government? Then will those concerns have their prices cut, while others—whose prices have also gone up but who do not sell directly to the Government and are not directly useful to it—go free of restraint on the prices?

If it is the law of the present Administration that all consumers be treated alike in the matter of prices, there are likely to be heavy cancellations of steel orders placed at higher prices. As a prominent steel producer expressed it to the writer the other day, "We cannot deliver steel to one consumer at \$100 a ton and sell to his rival at \$60 a ton. The former might have to go into bankruptcy. If low prices for steel are established a drastic readjustment will follow, not only in prices, but in wages. To summarize the situation, the steel industry has entered a period of stagnation. While Washington is dickering on prices and costs, consumers are doing nothing. I hope this condition will be only temporary, but I fear not."

If the program is carried out which the President suggests it will be impossible to get it going for months. What effect will this uncertainty have upon business? The effect that it already has had upon steel, iron and other metal markets has been to completely disturb and upset them even thus far. A few weeks ago consumers were clamoring for steel products, pig-iron, copper, lead, etc., while just 48 hours after the President's message was made public their markets came to a sudden standstill, and have been in complete stagnation ever since. Only a few weeks ago it was impossible to purchase the red metal for immediate delivery for less than 34 cents a pound. It is now being freely offered at 28 cents a pound, and as copper is a commodity which is dealt in by tons, a difference of 6 cents a pound is one that cannot be taken too seriously.

It will be remembered that shortly after war was declared the Government purchased 49,000,000 pounds of copper, and that it paid 16.67 cents a pound for it. At this time copper, by reason of the great demand from the belligerent nations of Europe, was selling at 30 cents a pound, so that the 16.67-cent price looked like a contribution to the war fund, and, in fact, was so considered by many copper producers. The truth of the matter is that the price was not made until after considerable pressure was brought to bear from Washington, where the fact was known that copper can be produced at from 8 to 11 cents a pound.

The effect of the reduction on the Government account, as related in my market review at that time, was to upset the outside selling market. Buyers reckoned that if it were possible for producers to sell copper at 16.67 cents a pound without loss, that they were paying too much at 25 cents. The result of these protestations was that the principal producers retired from the market for all nearby copper, and the price advanced to 34 cents. Things were so well managed that 29 cents, 30 cents and 31 cents represented the market for later positions, until the time came for a second purchase by the Government. Then it was argued by the chief producers that the Government price made from patriotic

motives was unfair; that it upset the entire market, and that it was beyond further consideration.

The Washington authorities took the complaint under consideration, but they wanted more copper, so they ordered 60,000,000 pounds. There was no time to agree upon an actual price, so a tentative one was fixed at 25 cents. When the time came for payment the Government agreed to advance on the purchase 75 per cent. of this tentative price, or 18¾ cents a pound, and to leave the balance open for adjustment pending a report by the Federal Trade Commission on the cost of producing copper. As soon as this interesting fact became known the outside market was in an uproar. It was figured that a compromise would establish a Government price of not more than 22 cents a pound, and buyers reasoned, with the President, that they should not be called upon to pay more than the Government. They therefore ceased buying, and for weeks the market has been at a standstill. Quotations there have been, but no business.

The thought that the one-price-for-all plan, if adopted on new metals, may lead to similar regulations in the case of old metals and scrap iron and steel has occurred to many members of the trade. It is easy to imagine a condition where an uncontrolled market on scrap material might soar far above a controlled market on virgin material, and unless prevented by law would lead to the introduction of a new industry, that of scrapping new or virgin metal for profit. For the sake of argument, suppose the Government fixes 20 cents as the price for all on ingot copper, and suppose that the demand continues to exceed the supply, and consumers, who are unable to obtain the full quantity that they require, are willing to pay a higher price for scrap copper, would there not be a temptation to melt new copper into rough castings and then sell them as old material? Would there not be a movement inaugurated to scrap any new metal if the price of scrap was above the controlled price of the virgin article, and where would this lead us to? If a one-price-for-all regulation is established in the old metal trade, what is going to become of the dealer who has always served the purpose of collecting scrap for reuse? The dealer cannot buy and sell at the same price and stay in business, and, on the other hand, the dealer cannot be eliminated without disorganizing this very important branch of industry and without an enormous waste of scrap material through the destruction of the collecting and distributing agencies.

What we are thinking about just now is the welfare of the country and our ability to defeat Germany. Let the Government go ahead and do whatever it pleases for its requirements, but let it not meddle with business. It would be bad enough in time of peace, but to take it up in time of war would lead to complete disaster to this great nation of ours, and would, indeed, be the greatest mistake that could be made. President Wilson has avoided any expression on the subject of price fixing which commits him to an enterprise so vast, and so clearly unconstitutional, as would be the attempt to regulate by law the prices at which private property-owners must dispose of their property to private purchasers. Indeed, the President goes so far as to say distinctly that the "law must command these things," and no man knows better than he does that the supreme law which commands these things is the Constitution of the United States.

### Colors, Enamels, Paints, Varnishes, Etc.

STEVNS & Co., Gl. Kongevej 19, Copenhagen, Denmark.

We are interested in fancy colors for automobiles for baking and air drying; black cycle enamel for baking, first coat and finishing, in barrels and tins; snow white finishing enamel, in gallons and tins; floor varnish in gallons and tins; body, flattening and general carriage varnishes; wagon varnishes in gallons and tins.

### Fents and Papers from India.

MOTILAL TIBREWALA, Patna City, India.

Remind manufacturers to send workable samples of fents and papers, with c. i. f. prices Calcutta delivery. Kindly give me an estimate of the quantity of fents and papers which the United States of America exports to Calcutta and other Indian ports.



## The Future of Japan

[Interview with Kazan Kayahara, Japanese Journalist, translated from Las Novedades by Francis Douglas.]

The explanation which Mr. Kazan Kayahara, now in New York, makes regarding the attitude of Japan is of much interest at the present time, and will greatly illuminate the problems of the Far East, which are poorly comprehended in general for lack of data.

"Japan will not go to war with the United States on account of immigration, but would fight against the United States or any other country in order to maintain the supremacy of Japan in the East."

These were the words of Mr. Kazan Kayahara, former editor of the newspaper "Yorodzu," and of the "Third Empire," who has recently arrived in New York from Tokio as correspondent of the Japanese press.

"The United States is not the only nation which excludes the Japanese. There are other nations that offend the susceptibilities of the Japanese people by excluding them from their territories, and the worst of the offenders among these nations is the ally of Japan—England. In South Africa, Australia and the other British colonies the exclusion of the Japanese is more rigid than in the United States. If Japan were to fight for the free admission of her subjects into the countries of the white races on the basis of equality with them, she would have to fight not only against the United States, but against the whole world of white people."

Mr. Kazan Kayahara laughed on saying this. His laugh was a genuine laugh, open and contagious. Then suddenly changing to a grave expression, he continued:

"But with respect to the Far East, that is another question."

"When you speak of the Far East, do you refer to China?" we asked.

"Yes, yes, China; for China is the field of commercial expansion for Japan. To exclude Japan from China would signify the isolation of Japan; it would impede the growth of Japan; it would paralyze her, obliging her to pause in her present state of development; and, you know, nations, like individuals, must advance or retrograde. They cannot remain stationary; they must go forward or backward, and when they go backward they die."

"Japan is developing a great steel industry. We obtain the larger part of the raw material from China. If we are excluded from these mines, our steel industry will perish. Furthermore, there exists the question of labor. The Chinese workman is the best in the world. He costs less than the Japanese, and the 400,000,000 inhabitants of China, with their enormous purchasing power, is another question which must be taken into consideration. Japan desires the Chinese workman, and desires the consuming power of China. She is ready to fight at any moment to acquire and conserve these two things, and she cannot acquire either of these unless she is predominant in China—that is to say, the Far East. Whatever menaces Japanese supremacy in China will force the entire Japanese nation to rise up in a moment. Only a part of the Japanese are disposed to fight because of exclusion, but this other question," and Mr. Kazan Kayahara smiled meaningly, "is a question regarding which the whole nation thinks as one man. It is a question of life or death for us. Isolate Japan and you crush her."

"But we do not intend to let her be crushed without a struggle. You know that Japan is not without friends in case of a new world alignment of nations. If the United States, Great Britain and France press us too hard, we will not hesitate to make an alliance with Germany. There exists no hostility against Germany in Japan. In truth, the Japanese admire Germany. The greater part of our scientific men have been educated in Germany. Our army has been organized on the German model. Our physicians are almost all graduates of German clinics. There do not exist any anti-German sentiments in Japan, and the events of the war have augmented our admiration for the German people and their Government. In case of necessity we would turn naturally toward Germany, and this necessity would exist if the present enemies of Germany should undertake to dispute our supremacy in the Far East—that is to say, China."

"It is clear that there does not exist an Asiatic Monroe Doctrine. There are too many European peoples

established in the Asiatic continent. There are the English in India, the French in Cochinchina and the Russians in Manchuria and Mongolia, to say nothing of the Dutch and Portuguese. But in the very moment that any of these undertakes to talk seriously of excluding Japan from China, Japan will fight to the extreme limit of her power."

"Why should not Japan be permitted to exploit China? You talk of economic waste in the United States. Here we have a colossal economic waste. England draws her cotton from your Southern States. She transports this cotton 3000 miles to Liverpool; she carries it to Manchester to convert it into fabrics, and then she transports it to the Far East. Now, here is what we propose to do. We desire to eliminate that economic waste, obviating the journey from Savannah to Liverpool and from there to Shanghai. We propose to take your cotton direct, convert it into cloth in the Far East—that is, in Japan and in China, and sell it there. Is not that reasonable?"

"And we are accomplishing it. We are doing even more than that. We are developing the cultivation of cotton in China. When the Chinese Government abolished the opium traffic—you know that the English once declared war against China to keep her from prohibiting this traffic—the Chinese planted cotton on lands which had formerly been used for the cultivation of opium, and today the cultivation of cotton is increasing constantly. Last year's crop amounted to more than a million bales. China is an ideal country for the cultivation of cotton, and Japan is an ideal country for its manufacture. In Japan it rains much more than in most countries in the temperate zone. The air is humid, very humid, as humid as the atmosphere at Lancashire, which is so admirably adapted to the manufacture of cotton goods. There exists no reason why we should not manufacture cotton goods as well as the English, and we are making them."

"Tell us your opinion regarding the participation of the United States in the development of China," we asked.

"Japan would welcome American capital with the greatest cordiality," responded Kayahara. "We need American capital, but American control is another thing. Nobody knows the Chinese as do the Japanese. The Orientals are separated from the North Americans by something more than the Pacific Ocean. They are divided by oceans of thought and oceans of sentiment. The Japanese are found at one pole of the universe and the North Americans at the opposite pole—spiritually. If the North Americans furnish capital to the Japanese, the Japanese will utilize that capital, and will cause it to return reasonable dividends. We are desirous to arrange for Americans to take part in the great work of developing and modernizing Asia, and American capital in a country like China needs that knowledge which the Japanese possess regarding the Chinese, and also the ability of the Japanese for organizing the vast industries of the Orient."

And Mr. Kayahara smiled again benignly.

### 25,000 WOMEN WORKERS IN LOUISVILLE FACTORIES.

#### As a Safety Measure Some Have Adopted "Bloomer-All" Garment for Shop Use.

Louisville, Ky., July 23—[Special.]—Much interest is being taken locally in the action of the Mengel Co. of this city in providing overall suits for the female employees at work in the paper-box department of its factory. Formerly the company employed men and boys in this work, but the labor shortage which has been developing in the last year or two has made it practically necessary to put women into places where they could do the work. Accordingly, the Mengel company has employed about two score of women and has put them to work in its paper-box department, where they do practically all of this work, handling the paper shooks and feeding them into the machines.

To reduce the danger presented by the combination of flowing skirts and revolving machinery, a "bloomer-

all" costume for the women workers has been adopted.

Dressed in garb of this character, the woman handling light work is every bit as capable and efficient as her brother. At the same time, the employer finds one of his chief causes of anxiety disposed of—that of likelihood to accidents where women are engaged among machines. Mr. Moore, superintendent of the Mengel company, is of the opinion that by dressing his girls in the bloomer-alls he has reduced the hazard by 75 per cent. There is another advantage which appeals to the workers—they can save the wear and tear on their own clothing. This means, among other things, that they can wear better clothes on the street to and from their work, an item that is of big importance to the average femme.

The Mengel Company purchased and provides these garments. At wholesale the better grade cost \$15 a dozen, and there are stock lots which can be purchased at \$2 less on the dozen. These shown in the illustration are of chambray, navy blue, a material that is sturdy enough to stand the strain likely to be put on it and yet not too heavy for hot weather. The garment is made in one piece, arranged to gather at the ankle, and opens across the back at the waist, the row of buttons being concealed under a belt of the same material as the garment. In the Mengel shop the ordinary workers are garbed in blue. The forewoman wears a tan suit, which renders her immediately distinguishable from the others.

At first the women—most of them girls and unmarried—were somewhat hesitant about putting on the bifurcated garments. But the leading spirits were heartily in favor of them, and presently the rest followed suit. Now none of them would go back to the ordinary waist and skirt by choice, and some of them are reported to have purchased similar garments for the housekeeping members of their families. One of the Louisville retailers has been featuring the same kind of a garment and has had a very good sale, and those who are astir early in the mornings or late in the afternoon often find their neighbor women out in their backyard gardens dressed in the same garb.

That there is a big likelihood of other manufacturers in Louisville purchasing similar garments for their workers has been indicated by inquiries of the Mengel company and inquiries made to the local jobber in the garments. There are numerous other factories in the city which are replacing men with women workers. The Louisville plant of the Standard Sanitary Manufacturing Co., for instance, has put girls to work as coremakers. The Ross Chair Co. has displaced boys at its machines with negro women, while there are many other women engaged in factories of various kinds all over the city. The State labor inspector assigned to Louisville estimated that there may be as many as 25,000 women and girls in factory work in and close to Louisville who are employed in other capacities than as clerks and stenographers.

### India Wants American Machinery.

M. G. HARADAS, Argon, Akala, Berar, India.

We want catalogues of: Complete oil-mill machinery for hourly capacity 100 quarters; sugar manufacturing equipment; rice-hulling machinery; equipment to manufacture colors from raw material; paper-manufacturing machinery; match-making equipment; brick and terracotta machinery; stationery; cheap jewelry; novelties.

### Steel Vessels for Milk.

SOC. AN. PER L'INDUSTRIAL DEL RISCALDAMENTO, via Stelvio 102 A, Milan, Italy.

We are interested in data on complete setting of machines for construction of steel recipients for milk transport. Made in one piece, with triple tinning. Capacities 5, 10, 15, 20, 25, 30, 40 and 50 lighters.

### Wants Equipment for Rolling Mill.

J. B. VAN HELST & ZONEN, Gravenhage, Holland.

We want to establish a rolling mill to reduce steel sheets of 3 to 5 mm. into sheets of 1/4 to 3 mm. to 1000 mm. wide. We want offers with full particulars and drawings for hot rolling mills.

## Leather from Shark Skins Product of Large Florida Factory

PITTSBURGH COMPANY TO ERECT \$300,000 PLANT AT ST. PETERSBURG, FLA.,  
TO TAN HIDES OF DEEP-SEA MONSTERS—INTERESTING FACTS ABOUT SHARKS.

Announcement by the Universal By-Products Co. of Pittsburgh, Pa., that plans are being drawn for a \$300,000 plant at St. Petersburg, Fla., for making leather of sharks' skins and for handling all kinds of salt-water fish is contained in an interesting letter received from President J. F. Lavarne, written from the company's home office at Pittsburgh. Mr. Lavarne describes the various kinds of sharks from which his company produces leather for all kinds of purposes, and he gives a number of interesting facts of these "pirates of the sea."

In the course of his letter Mr. Lavarne says: "The Universal By-Products Co. will manufacture leather from the skins of all varieties of sharks as well as all fishes, and also can all varieties of fish and manufacture about 200 different by-products making glues, jellies, gelatines and all their different varieties; manufacture oils for shoes and all varieties of leather, including oil for saw works and oil of different varieties for steel works; also manufacture margarine butter and cooking oil to take the place of lard, and manufacture calf feed, chicken feed and chicken scrap and fertilizer. We will also handle different varieties of salt fish in barrel lots, and in every way that fish is put up. We will be pleased to send samples of any of these products to anyone asking for them."

"The Universal By-Products Co. was incorporated February 19, 1917, but I have been experimenting on tanning shark skins myself and handling all kinds of fish by-products practically all of my life. We incorporated The Universal By-Products Co. to get sufficient funds to enlarge our plants and have different manufacturing plants all over the world, as the demand for by-products is so great that we are stymied with letters from all over the world for samples of our by-products and leather. We have never had as yet any difficulty in getting all of the sharks that we wanted in our Alaska plant, that is, during the five and a half months of the summer time. The winter time makes it too difficult to fish outside of the bays, and even in the bays it is so rough and the wind blows so hard that I have seen the swells in some of those bays run up from 15 to 100 feet high, which makes it very dangerous—in fact, practically impossible—for a man in a small boat to go out to catch sharks."

"At the present time we are going to enlarge our plant in Alaska; we are also drawing plans for a plant in Seattle, Wash., to cost upwards of \$300,000, and another one in St. Petersburg, Fla., at approximately the same cost. We hope to start work on the St. Petersburg plant this winter."

"There is as much value in an ordinary size shark, when made into leather and by-products, as there is in an ordinary cow. They cost very little to get compared with cattle, and there is just as much demand for all of the by-products from fish and shark as there is from cattle."

"There are at least 10 varieties of sharks, the skins of which can be turned into good commercial leather. It can be put to any use that any other leather is. It is strictly waterproof, and the testing qualities are good. The varieties of sharks are: The blue shark, which attains a length of about 15 feet; basking shark, 18 to 45 feet; pilgrim shark, 15 to 22 feet; porpoise, about 8 feet; bone shark, from 8 to 30 feet; man-eater or white shark, up to 25 feet; great tiger shark, about 20 feet; hammer-head shark, about 15 feet; thresher shark, 15 to 25 feet; mackerel shark, 8 to 15 feet."

"A very large section of the shark family live at immense depths, but unlike most of the deep-sea fishes, as opposed to the surface or near the surface fish, the sharks do not confine themselves to the profundities; they apparently seek those mysterious depths to breed."

"Many of them deposit their eggs in carefully-adapted purses of toughened membrane, so arranged that they will open of themselves at the right time. Then, having provided for the continuation of the species, as far as they are concerned, they return to the surface."

"The shark, with an adaptability shown by no other fish, comes and goes between the surface and depths of 4000 and 5000 feet. The shark is a cartilaginous fish,

By cartilage we mean a bloodless tissue, commonly called gristle, flexible but not elastic, quite colorless, of the consistency of cheese rind and of use in the anatomy of animals for sustaining or connecting softer parts."

"With few exceptions the sharks have externally the same general form as the typical fishes. Instead of broad, flat scales that overlap each other like shingles, their scales are very minute, horny, sharp-pointed, and closely packed together. When the skin of a shark is stroked from head to tail it feels like a haircloth sofa, but when stroked the other way it is like the sharpest sandpaper."

"For centuries shark skin has been used for smoothing and polishing wood and other substances, and when prepared for that use it is called 'shagreen.'"

"Instead of one very large gill opening, as in typical fishes, a shark has usually five small slits in the skin behind the gills, which are capable of being tightly closed. In nearly all species the mouth is situated underneath the head, and often it is of enormous proportions. The jaws are composed of cartilage. The teeth are usually triangular, and set along the edge of the jaw in rows, crosswise with the edge of the mouth. Behind each active and visible tooth there is a line of reserves from three to five in number, always growing outward and crowding to the front, so that as soon as a tooth in the line of battle becomes much worn, or in any way weakened or broken, it is crowded off the jaws and a new tooth is thrust forward into its place."

"Many sharks bring forth their young alive, but others (the majority perhaps) lay eggs. Some of the egg cases are of remarkable form; some of them are rectangular, flattened or provided at each corner with a long, thread-like tendril with which to attach to any fixed object."

"Sharks very rarely exhibit color patterns, or bright colors of any kind; as befits pirates and freebooters, they are mostly ashy-gray, or drab, the most inconspicuous colors at sea, both for sharks and men-of-war."

"The small tiger shark of Ceylon (*Stegastoma Tigrinum*) is one of the few sharks of variegated colors, and its handsome pattern of yellow and black is a welcome variation."

"Only a few of the whole 150 species of sharks can rightly be classed as man-eaters. A typical man-eating shark is one which is very large, exceedingly voracious, practically devoid of fear of mankind, and so aggressive that it will attack a swimmer at the surface of the water and devour him, regardless of his resistance. The standard prey for sharks consists of small fishes, squid, jelly fishes, crabs, lobsters and other non-combatants. Occasionally, however, the big tiger shark (*Galeocerdo Tigrinus*) of the Atlantic chooses a victim in his own class as a fighter. Dr. Goode notes the capture, by Captain Atwood, at Provincetown, Mass., of a specimen which contained 'nearly a whole full-grown sword fish' and '10 or 12 wounds in the skin of the shark gave evidence of the contest that must have occurred.'"

"The man-eater shark is not a myth, for that name is applied to the great white shark, a species which ranges from our Atlantic coast to Australia, and on to California. In the tropics it attains the length of 30 feet. With us this creature is rated as 'exceedingly rare,' and, judging from Dr. Goode's notes, not more than a dozen specimens are caught and identified in a century. The only loss of life from it on our coast, so far as recorded, occurred in 1830."

"It is, indeed, fortunate and merciful to mankind that sharks generally are harmless to man. Were they otherwise the terrors of the sea would be greatly increased."

"The mackerel shark (*Lamna Cornubica*) is a fair type of the sharks of the world. It is common along both coasts of the United States, and the length of fully grown specimens is between 9 and 10 feet."

"The hammer-head shark (*Sphyrna Zygaena*) is a genuine curiosity. With no intermediate forms leading up to the strange departure, the head of this creature suddenly thrusts out on each side a great shelf of cartilage and skin, in the outermost edge of which the eye

is situated. It is like a flat-headed shark with a seven-inch board, 20 inches long, placed squarely across its forehead. This species is found in the seas of the tropics and subtropics, practically around the world."

"The majority of the species of sharks are under eight feet in length, and a few are as small as two feet when adult."

"In catching sharks we have lines that are half a mile long, half-inch manila rope, which are stretched and afterwards tarred. We anchor them in the bottom of the ocean from 100 to 400 feet deep. Then we have a buoy from the anchor to the top of the water at each end of the line, so we know where our lines are set. We use the buoy only when we get out in the ocean and away from the landmarks, as we would not know where our lines are set only by compass, which is difficult; but where we set them in bays ten or twelve miles wide we have landmarks, and when we get out to where the line is we drag for our main line and bring it up to the top of the water, bait our hooks—that is, any that need fresh baiting—and keep on going from one hook to the next one until we get to the shark. Our hooks are made just the same as an ordinary fishhook, but are six inches long, and we generally put our hooks about twelve feet apart on our main line; then we have a small rope between our main line and our hook, which is about three feet long. But a better way than that is to put a piece of chain about a foot long between the hook and the small rope, as oftentimes they swallow the hook and the bait so far that they cut the rope, and in the morning, instead of having a shark on the hook you have no shark and no hook."

"We can catch sharks the year round in large bays in the Southern countries. Where they run in large schools, as they do around Nicaragua and the South Sea Islands, we can have a seine net, which is made heavier than the regular salmon seine net, and have them half a mile to a mile long. We can seine a large number of them when they go in schools, and in that case we would have to have fish traps built so that we could haul them inside of our traps and keep them there in large quantities, the same as stockyard people keep their cattle, and keep them fresh until they are needed to be butchered."

"The above are only some of the details about the shark family. I cannot give to the public the methods and the ingredients that I use for the tanning, as that is a secret to myself, but anything else that you would like to know I would be very pleased to furnish your valuable magazine."

### \$6,000,000 FLORIDA DRAINAGE ENTERPRISE.

Engineers Engaged for System to Reclaim 550,000 Acres in Everglades.

Isham Randolph & Co. of Chicago and Jacksonville, Fla., have been selected by the supervisors of the Napoleon B. Broward Drainage District as chief engineers of that project, which proposes the drainage and reclamation of 550,000 acres of Everglades land in Dade and Broward counties, Florida. The total estimated cost of the drainage work in the district is upwards of \$6,000,000. These lands are in the vicinity of Miami and Fort Lauderdale, and the headquarters of the district will be at Fort Lauderdale. Engineers were asked to submit bids in competition for the position of chief engineer. The Randolph offer was \$250 a month for taking charge of the enterprise. The next lowest bid was \$5000 a year; other offers were from \$5000 to \$10,000 a year.

William A. O'Brien, who has had charge of the big Giardeau drainage district in Missouri, has been retained as project engineer by the Broward District Supervisors at a salary of \$5000 a year.

The Napoleon B. Broward Drainage District was organized recently, the supervisors being W. C. Kyle, Fort Lauderdale; A. B. Lowe, Davie, Fla.; R. O. Watson of Miami, Fla.; A. L. Joiner, Fort Lauderdale, secretary. The district is practically within the Everglades, and the large acreage will be available for cultivation. A levy tax of 25 cents per acre for organization and preliminary expenses has been arranged. Other details will be given prompt consideration, so that the supervisors and the engineers can call for proposals on the necessary construction.



# Unjust Taxation as Unwise as Would Be Unjust Conscription

[Special Correspondence Manufacturers Record.]

Washington, D. C., July 23.

The question of the intelligent conscription of capital is one of the most important that Congress confronts at the present time.

Involved in this proposition are principles fully as vital as is the outstanding need for an adequate army of fighting men or the obtaining of the actual revenues essential to the prosecution of the war.

Congress went wisely to the roots of the situation when it decided upon the plan of selective conscription that is to make up the force of fighting men who will join the Allies in France in the task of making the world safe for democracy.

It is readily seen that the selective conscription plan takes cognizance of a host of conditions. By its provisions there is first segregated the character of material as to age and physical fitness best suited to military requirements.

But this is only the beginning. The next task, devolving on the exemption boards, is a sifting of this material in such manner that the right men will be in the right place. This calls for a consideration of the results that will follow the taking of each individual from his present occupation and of the nature of the responsibilities which he will leave behind if chosen for active duty.

It is obvious that where a man would leave helpless dependents who would have to look to the Government for support, his selection for active service would be unwise. This would place a burden on the Government at a time when all of its powers are to be concentrated on the one great duty ahead.

But while Congress has acted thus wisely in its process of selective conscription as regards men, the same is not so apparent in its attitude toward the business industries of the country.

There can be no question that the latter are to be called upon to perform a war service second only to that of the soldiers in the ranks. With this fact acknowledged, it would seem that the same selective principles should be applicable in all legislation regarding business as have been operative in determining what men shall go to the front and what classes shall remain at home, with the latter in their respective spheres also working patriotically for the best interests of the nation and equally engaged in helping to fight out the war to a successful finish.

The war revenue bill now in the hands of Congress contains several propositions in the way of suggested amendments that are vitally connected with the idea of the "selective conscription of capital" along the lines followed in the selective conscription of men.

One of these is the Jones amendment, which provides that all corporation earnings withheld as a surplus shall be made subject to a tax of 15 per cent., in addition to the "excess profits" tax. Should such earnings temporarily withheld afterward be issued in the form of dividends to the stockholders, it will then be subject to the customary income tax, irrespective of the fact that the 15 per cent. tax imposed for withholding has already been paid.

This amendment is obviously punitive in character. Its only defense is that it will tend to drive all earnings "into the open" and thus make them amenable to the income tax.

But sight is lost of the fact that such action is as arbitrary and unwise, in view of the present national exigency, as it would be to force every man between the ages of 21 and 30 into active service, without consideration of what work he is now doing or what effect such summary methods would have on the war program as a whole.

One of the points insisted upon by the Administration is that all industries shall be prepared to meet the unusual and uncertain requirements which the exigencies of the present great war may at any moment impose.

This necessarily implies that the wise corporation will withhold a safe surplus from its earnings in order to be able to meet just such emergencies as they arise. But the Jones amendment is a blow at such precautions. Forward-looking business is fined for being in readiness

to speed up at prompt notice. Preparedness is penalized and capital is "driven into the open," no matter what effect on the conduct of the war may be. Such suggested legislation as this is in direct opposition to the best interests of the country. It is the very antithesis of the "selective conscription" method adopted in the formation of the new national army, which met with scarcely any opposition in Congress, which had the prior approval of the military experts, and which has the crowning merit of being democratic to the core.

Of an opposite sort of legislation is that proposed in the Hollis amendment, which would exempt from the provisions of the income tax that portion of all incomes that are contributed to charitable, educational, scientific and religious purposes.

This, if the selective conscription of the soldiers is right, becomes the selective conscription of capital in the right way.

A few illustrations of the manner in which it will work may be gained from an examination of the amendment itself, as also by a consideration of the fields in which the exempted incomes will be employed.

Under the terms of the amendment, not more than 20 per cent. of the gross income can be diverted to philanthropic purposes and escape the application of the income tax provisions. If, then, one with an income of \$2,000,000 should wish to "go the limit" in charity, he could contribute \$400,000 and escape \$196,000 in income tax. But the payment of the additional \$204,000 enforced by his action is its own proof that no "taxation dodge" was behind the deed.

How the Government is the gainer may be as easily shown. The Red Cross is maintained by private contributions. If it were not for this, the Government would have to foot the bill, for the Red Cross work is imperative. Its War Council recently raised \$100,000,000 by subscription. While many small amounts went to the grand total, large business interests paid the most. In more than one city where the call was not being responded to in a popular manner Chairman Davison and his lieutenants called 15 or 20 prominent business men together and told them of the situation. The result was that \$500,000 or more was forthcoming within a quarter of an hour.

In numerous cases the large corporations had an agreement with their stockholders that considerable sums would be withheld from the earnings for the Red Cross. At times this plan met with opposition on the sole ground that the stockholders objected to being taxed on the sums so contributed.

Another field of philanthropy that must be kept up is that of education. Stress is laid by the Government on the necessity of having all lines of teaching progress as usual during the war, especially those connected with technical training. This is of exceptional importance in the South, where many technical and other schools are maintained by private bequests, especially among the negroes. To lose this support from any cause would be to impose heavy burdens on the States or the National Government. It is believed that Southern Congressmen, when made cognizant of the full intentions of the Hollis amendment, will give it their unqualified support. Furthermore, it is apparent that in the whole course of tax legislation for revenue purposes the selective conscription idea should be made applicable in the field of capital as it has been in the field of human material, and for the same reason.

## Potash from Molasses Waste—Successful Operations Reported in New Orleans.

New Orleans, La., July 21—[Special.]—When the European war is over, the agriculturists of the United States will not be under the German industrial heel. This is the task that chemists of the South have set for themselves, and this is a task that they are now on the way to achieving. They want to make this country independent of Europe for its potash supply, and especially independent of Germany, and the two successful potash recovery plants now in operation at this city

indicate that they will be successful. These plants recover potash from tropical blackstrap molasses distillery slop, and do not pretend to be able to make muriate of potash, a substance in large use in the manufacture of ammunition, but they do maintain that they will be able to make potash for use with other substances in the preparation of fertilizers on such a large scale as to make it impossible for Germany to collect her war debts, taxes and sur-taxes from the farmers of America when the hoped-for days of peace again obtain.

A visit to the wonderful yet simple plant of the by-products department of the United States Industrial Alcohol Co. in this city, of which Joseph Dennee is general manager, resulted in the correction of certain erroneous reports as to extravagantly large profits which local newspapers have fallen into publishing recently. The other plant is located at Harvey, in the big Jefferson parish industrial district exactly opposite the city of New Orleans, and the process of reclamation there is the same as at the New Orleans plant. Reports that such plants, of which these are the only two in the country, were able to reclaim 24 tons of potash a day each from 224,000 gallons of blackstrap molasses distillery slop each are entirely untrue. Both of these plants recover in a day from twice this amount of slop only about three to four tons of pure potash, and this only from blackstrap molasses from San Domingo, Cuba and Porto Rico. Such recovery is not possible from domestic blackstrap.

The plant visited was the first of its kind established in the United States. It was the second step in the industrial recognition of blackstrap molasses, which had for many years not been used for anything, and which then had been utilized in the manufacture of alcohol and the slop therefrom thrown into the city sewers, which slop now forms the basis of this great potash reclamation.

Discussing the possibilities of the expansion of this industry in the South, one of the leading men connected with the industry in this city said: "If the war would last 25 years it might be a profitable and wise thing for men with millions to invest to establish plants for the manufacture of muriate of potash all over the country, but barring the continuation of the conflict, the aim of those interested in this great movement to curtail waste is to expand the industry so as to insure the country against its being held up at the point of an industrial pistol made in Germany when the farmers of this country bid for the potash of that nation." He believes, and many others in the industry do also, that we will never be able to buy potash from Germany at the price we were accustomed to pay before the war. In order that this industry of reclamation will survive the war's end, the companies here are not selling the product at the rate of \$400 a ton, as has been also incorrectly reported, but at about \$125 per ton, which is a reasonable figure for it when it is remembered that it is sold to the consumer in combination with other cheaper substances in the shape of fertilizers. They believe that at this rate they will be able to make money and at the same time that the farmer will be able to buy the fertilizers made with it. They think that from an agricultural standpoint it is a certain success, and that many more factories could be built and should be built in the South, especially at seaports. Locations must be where water, an essential need of a successful plant of this kind, can be had easily, and they must be within close transportation distance of the source of tropical molasses supply.

Those connected with the industry here think that numerous distillery plants and such reclamation factories will be built in the South as soon as the country recognizes that it will be to the interest of the farmers of this great nation to be potash-free of Germany when the European war has become history.

Besides having fertilizing value, this reclaimed product is claimed to possess other valuable qualities, and the head Eastern offices of this New Orleans plant is said to be about to announce some very interesting discoveries of other values it possesses.

## France Needs Agricultural Equipment.

FABRE & GONIN, 65 Rue Thomas, Marseilles, France.

American houses which interest us are those making agricultural tractors, plows, cultivators, threshing machines, etc., who have no agents in France. Such firms may communicate with us, giving complete information with terms and prices.

# Hunt for Big Oil Pool Under Way in Louisiana

EXTENSIVE OPERATIONS PROPOSED ON 25,000 ACRE TRACT NEAR MORGAN CITY—REPORT OF PRESENT CONDITIONS IN VARIOUS FIELDS OF PELICAN STATE—MUD LUMPS AT MOUTH OF MISSISSIPPI MAY MARK LOCATION OF VAST DEPOSITS.

By STANLEY CLISBY ARTHUR, New Orleans, La.

The "big story" in the oil and gas circles in New Orleans for the week was the public announcement that 25,000 acres of the Land Trust Co. just below Morgan City had been leased to a large New York concern represented by George B. Gifford, who gave out that another large oil refinery would be erected there "should oil be discovered in sufficient quantities to warrant it, and even should oil not be found the McCormick wells, 16 miles south, no doubt would justify the erection of the refinery."

There will be noticed a very large "if" in the statement. As the matter stands, the Castell tract, as the Land Trust Co.'s holdings are referred to, will be the scene of a new oil and gas development. Drilling will start as soon as the necessary materials are moved to the spot and will be done on a large scale, as it is understood that a very strong organization is behind the deal. The name of W. E. D. Stokes, New York multimillionaire, is mentioned in this connection. Attention should be also called to the fact that the McCormick wells are now gassers, and, while that company expects to get oil, still none has been struck.

The tract purchased is on the east bank of the Atchafalaya River, eight miles south of Morgan City. Should oil be found there the site offers fine water frontage, a deep channel to the Gulf and excellent facilities for wharves and other things necessary for a refinery. Mr. Gifford said that he believes the Terrebonne field will become one of the greatest, if not the greatest, oil fields in the country.

I have just returned from an extensive trip through the southwestern part of the State, where I visited the various oil fields. There is nothing suggesting a boom in any of the fields, but all were steadily at work, employing a large amount of labor. At all places complaint was made that the pipe scarcity has retarded development to a greater degree than any alleged "drying up" of wells. Also the increased cost of all materials used in piping oil and gas from the bowels of the earth has had its effect in stopping any enlargement plans.

At the Ged field (Vinton) there is a marked movement of the operations to the southeastern part of the field. The Ged field has always been known as a shallow field, the well pumping the oil from 1200 to 1800 feet. Now, not only are the new wells being sunk in a different part of the field, but the old holes are being bored deeper, from 2900 to 3200 feet. As a direct result there have been three gushers brought in in the past 90 days. The Gulf Coast Oil Co. was the most successful in this regard, bringing in two of the gushers.

The wells in the Ged field are mostly pumpers, but three of the wells flowing under subterranean pressure caused a slight flurry among the workers. The Gulf Coast Oil Co.'s new well in unproven territory, in the southeastern part of the field, was a 15,000-barrel gusher, with no salt water. It was an "all pipe line oil" producer, but dwindled to 7000 or 8000 barrels for 60 days. When I visited the derrick it was under pump, with a small percentage of salt water.

The most noteworthy feature of the field was the prospecting in the marsh and woods in a general southeasterly direction from the proven field and in the neighborhood of the intercoastal canal. Oil men in general are keeping their eyes on these new developments, and the general impression is that they will produce.

In the Edgerly field the interest centered around the Gulf Refining Co.'s Moore No. 5, which came in on the morning of the 11th in heads and at a depth of 3050 feet. As the well washed itself out, vomiting the drilling water and mud, the heads became larger and longer and the percentage of "bad stuff" lessened until it was estimated late in the afternoon that it was making 2000 barrels, with 8 per cent. water.

The Lyons Gulf Coast Oil & Development Co.'s Fair-

child well was flowing, but it was expected to cease within a day or two, and the company had everything in readiness to put the pumping beam on without the loss of any time. Two 1200-barrel storage tanks were finished, and they are taking care of the product of this company.

The 200-acre reservoir for taking care of the salt water coming from the Edgerly wells has been evaporating this water for some time, and department of conservation agents feel that it will take care of all this field will waste for some time to come. The compromise of the suits brought against the oil operators by the neighboring agricultural interests, who claimed damage to their crops by the salt water allowed to run into Chopique bayou, relieved the situation considerably, as the field was threatened with a complete shutdown until the courts decided the matter.

Both the Ged and Edgerly fields have strong gas pressure, but no "gassers" as yet. The lasting impression of both fields is that they are steadily producing, with a few wells going dry (this is most noticeable in the Ged field), but that all the oil gained is pumped. Neither field is doing anything spectacular.

The Evangeline fields (Jennings) is practically standing still. There is some prospecting being done by Welsh operators, it was pointed out to me, but from being the first field in the State it was rapidly falling to the rear. At Welsh the situation is about the same. Here all the wells are "shallows," from 1500 to 1700 feet being the average depth. The wells are making from 75 to 100 barrels, with salt water, and the biggest production being found on the Bullfrog lease.

At the Anse la Butte field the Acme Oil Co. and the Home Company are preparing to operate on bigger lines, and the rest of the field is running at a steady gait. The Iberia field, according to all reports, will show more oil as fast as the many new locations are drilled. Shortage of pipe and drilling casing is impeding the expansion of the field greatly, but reports have been received that there will be an arrival of a number of lots of piping before the end of the month. The 1000-barrel production of the Gulf Refining Co.'s No. 5 has about 75 per cent. salt water, while the other producers are also bothered to a greater or lesser extent with the same trouble.

Reports reaching the officers of the department of conservation as to oil production in North Louisiana show that the average for the different fields during the past week were: Caddo district, 15,100 barrels; De Soto district, 6350 barrels; Red River district, 4600 barrels.

In the district including Union, Morehouse and Ouachita parishes, which is about 18 miles north and south by about 20 miles east and west, there is a great deal of gas being produced, but no oil. The Commercial Oil & Gas Co.'s well No. 1, at 2279 feet is producing 3,100,000 cubic feet; their No. 2, at 2176 feet is producing 6,600,000; the Progressive Oil & Gas Co.'s No. 1, 2122 feet, is producing 7,000,000 cubic feet; their No. 2, 2242 feet, is producing 11,000,000 and their No. 3 at 2126 feet is producing 12,000,000; the Morehouse Development Co.'s gasser, at 2526 feet is producing about 15,000,000.

In the Terrebonne field, brought to public attention by the two wild gassers there the past couple of months, definite moves are being made to serve the gas commercially to sugar-houses and other nearby places, as outlined in the MANUFACTURERS RECORD story some time since. Sugar factories of Terrebonne, Lafourche, Vermillion, St. Mary, Assumption and Iberia parishes and all that territory lying on a line between Lockport and Gretna running north of Lake Salvador will be served with natural gas from the two McCormick wells below Houma.

The McCormick people also announced that towns

and industries in the section of the State west of the Mississippi River and south of a line through Baton Rouge, Opelousas and Lake Charles would likewise be served as soon as the company could lay their 16-inch pipe for main lines. It will be noticed that the company officials say absolutely nothing regarding serving New Orleans with natural gas, although they are but 45 miles from the Crescent City. Regarding this phase of the matter the company officials make no comment when asked, although General Manager Thatcher told your correspondent at the time the second gasser was running wild that it was their intention to supply New Orleans with this gas and that "public opinion" would be their strong card to play if any opposition developed.

For the first time since these wells were brought in the actual depth of these big gassers are at hand. The first well was 2673 feet in depth and the second was 2973, thus being slightly less than the estimated 3000 feet made by your correspondent. It is learned that the McCormick people have leased ground for 50 miles around their wells.

The stage is all set for a big oil boom in Louisiana. Whether the big pool will be found in Terrebonne or elsewhere is the question.

"Louisiana is to be a second Tampico," was reiterated to me yesterday. This time the prediction was made by a man who believes that the great pool will be found at the mouth of the Mississippi.

"Take a map of Louisiana," he said, "and follow the direct course of the streams in the State and see where they lead. The Red, the Ouachita, the Black and the others follow the main course of the Mississippi down obliquely through the State. The Atchafalaya branches off and has a separate course to the Gulf—see what McCormick found in Terrebonne, and you have an answer to the quiet little gobbling up of property below Morgan City by the Castell interests. All right, keep on now down the Mississippi River and go as far as you can, and what do you strike—the mud lumps at the mouth of the many-fingered deltas. What causes these lumps? There you have the question that has puzzled everyone who has observed them since the discovery of the Father of Waters.

"The mud lumps, the bane of the United States Army Engineers, who have labored to keep the channels open there for navigation, are the answer. There, 90 miles below the city is the oil field that is to rival Tampico and go it several better."

The above, of course, is all talk, but, for that matter, so was anything concerning the biggest gas well in the State in Terrebonne a year ago. My informant's remarks about the mud lumps at the mouth of the Mississippi are true in all respects. They have been there, and their reason for so being has been the topic of endless discussions on the part of geologists, no two, according to my knowledge, ever agreeing on the same reason. I have seen them, in one place at one time and in another at a later period. Even the pelicans, who choose them for nesting places, have become disgusted with the manner in which they shift about, and have virtually abandoned them for more stable locations. I have even seen the oily scum that floats about these lumps at times when the weather permitted an absolutely calm, smooth surface to the water.

Inquiry as to any activities in an oil nature in this part of the State merely brought out that H. J. Harvey of New Orleans had purchased some 150,000 acres of land that belonged to the Rectangle Land Co. between Grand and Tiger passes and just below Venice. However, there are a number of casings being sunk along the banks of the Mississippi nearer the city of New Orleans. So far, nothing has been brought in, but all express strong hopes.

## Cycles and Cycle Supplies.

A SPEIDEL, 16 Bul. Georges-Favon, Geneva, Switzerland.

I want to purchase cycles and cycle supplies, accessories for motorcycles, etc. Just now especially want cycle saddles; tool bags; cyclometers; cycle spokes plated and tapped with nipples; hub coaster equipments; speed gears; spanners; bells; chains; frames; handle bars, etc.; frames in lots of 100, 250 or 500, with parts in proportion. Want complete motorcycles and engines, batteries, gear hubs, mirrors, lamps, chains, saddles, hubs, etc., in lots of 25 to 100 each for important parts and small parts in proportion.



# Lands of Surpassing Fertility Made Tillable by Drainage Work

IMPORTANT ADDITIONS TO FOOD-PRODUCING AREA OF UNITED STATES  
TO BE EFFECTED BY FLOOD CONTROL IN LOWLANDS OF MISSISSIPPI  
VALLEY.

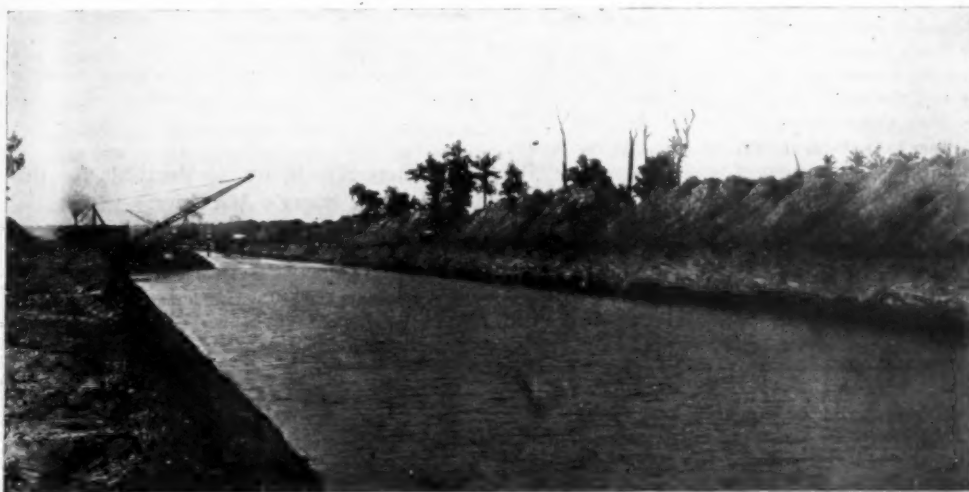
[The vast importance of draining the lowlands of the Mississippi Valley in order to increase the food-producing area of the country was strongly stressed in an address recently made by Mr. L. L. Hidigener, vice-president of the Morgan Engineering Co. of Memphis, before the Southern Alluvial Land Association at Memphis, Tenn. Mr. Hidigener pointed out that reclaimed lands in the St. Francis River Basin have increased in value from the nominal figure of a few dollars previous to drainage to a value of \$100 to \$150 an acre since they have been drained and put under cultivation. It was also pointed out that the lands in the Mississippi delta are, when drained, the equal in fertility of any lands in the world—the equal of the delta lands of the Nile, that are held at from \$500 to \$750 an acre, or those of Holland, that sell at from \$600 to \$1000 an acre.]

Extracts from the address of Mr. Hidigener, which was confined to a description of conditions in the St. Francis Valley and in the Yazoo Delta of the Mississippi, are given herewith.—Editor Manufacturers Record.]

There are about 1,500,000 acres in the St. Francis Valley that would either be directly or indirectly benefited by flood control.

In order to control floods in the entire St. Francis Valley it would be necessary to organize a large drainage district. Federal authority would probably be necessary, because it would lie both in Arkansas and Missouri. Such a district would probably not attempt to do detailed drainage work, and ordinary drainage

same general problem arises as in the St. Francis Valley. The water that enters the delta from the hills spreads over the low, flat land and floods it until the existing channels gradually carry it away. Careful surveys have been made on the Coldwater River and examinations made on the Tallahatchie, Yocona and Yalobusha rivers, all of which go to show that reservoir sites are in existence on all of these streams. Here, as in the St. Francis Valley, apparently the most



CONSTRUCTING LARGE DRAINAGE CANAL IN YAZOO DELTA, MISSISSIPPI.

districts would proceed as they do at present, except that they would be required to join their work to that of the large district in a proper manner. Until comprehensive surveys are completed it will be impossible to say specifically how the problem should be handled, but it seems that some method of reservoir control is not only feasible, but is necessary as a part of the final plan.

Referring to the Yazoo Basin in Mississippi, the

effective method of flood control is the construction of reservoirs in the hills to hold back the flood water until it can be drained away through existing channels. The area of the Yazoo Basin is 14,000 square miles, or about 30 per cent. of the entire State of Mississippi. About half of this area is delta land. Apparently the area that would be benefited by the control of flood waters would be about 2,000,000 acres, and an expenditure of a few dollars per acre would provide a fund of

several million dollars to carry forward the work, and while complete surveys have not been made, it appears entirely feasible from a financial standpoint. With these floods from the smaller rivers controlled, drainage would be much simplified, and it would go forward much more rapidly than it can under existing conditions.

The time has now come when landowners cannot afford to allow their lands to lay idle and continue paying taxes on them unless they can be made to produce, and only by drainage can the majority of the delta lands along the Mississippi River be put under cultivation.

The benefits of drainage to delta lands has been proven beyond any possibility of doubt. At the upper end of the St. Francis Basin, in Southern Missouri, lands that before drainage were valued at but a few dollars per acre have now been put into cultivation and are valued at from \$100 to \$150 per acre. It is true that during the interim required to drain and improve the land all overflow land has increased somewhat in value, but this increase is largely speculative, and not real, as it is where the land has been drained.

With drainage better crops can be grown on land that is already in cultivation. If drainage would increase the production by only one bushel of corn, at a value of 75 cents per bushel, the capitalized value would be \$15. An increase of one bushel of wheat at \$1 per bushel would show a capitalized value of \$20 per acre. Practically no increase of labor would be necessary to increase the production by these amounts, so that the owner would receive the full amount as net return.

The United States Department of Agriculture has recently collected data concerning the increased value of lands in Bolivar county. They sent a list of questions to various landowners. The average results of 29 owners who replied shows that drainage in Bolivar county has increased the value of cleared land 66 per cent.; of uncleared land 69 per cent., and has increased the rental value of cleared land by 56 per cent. In Bolivar county the increased rental alone would pay the drainage assessment in two to three years.

The price of lands in the Mississippi delta are far below the normal value of lands in the United States. The soil is as fertile as any in the world. The land in the corn belt of the Middle West, which is no more fertile, varies in price from \$200 to \$350 per acre and rents for \$6 to \$8 per acre. In the cotton belt cleared lands that are valued from \$50 to \$100 per acre rent for from \$8 to \$12 per acre. It is a known fact that these lands produce more valuable crops than the lands in the corn belt. There is no doubt that they will ultimately sell at a higher price than lands in the corn belt. Delta lands in Holland sell for between \$600 and \$1000 per acre, and in the Valley of the Nile from \$500 to \$750 per acre. The population of the delta lands of the Mississippi River is 56 per square mile; in Holland, 400; in the Yangtze Valley, in China, 400; in the Yellow River Valley, in China, about 600, and in the Valley of the Nile, about 940. With equally fertile lands in the delta of the Mississippi River, there is no reason why the population should not increase many fold, and why the lands should not ultimately sell for \$300 to \$500 per acre.

## Australian Wants American Agencies.

WILLIAM G. LANDGREN, Manufacturers' Agent and Importer, 95 York Street, Sydney, N. S. W., Australia.

I desire agencies. Have showroom centrally situated and am open for energetic representation of manufactured goods, such as aluminum ware; enamelware; glassware; earthenware; brushware; lampware; gas and electric globes, lamps and lanterns; window glass; plate glass; cathedral glass; automobile accessories; leather specialties; harness; firearms; household goods and specialties; oilcloth; roofing; stoves; oils; veneers; woodenware; wheelbarrows; wire fencing; wire netting; gates; general hardware.

## Steel-Working Machinery Needed.

R. YEZOYE SONS & Co., Tokyo, Japan.

We intend to supply many American-made machines, tools and materials, a few of them as follows: Shearing machine to cut down steel sheet at steel-safe factory; steel sheet (plate) bending machine, for steel safe-makers to bend sundry steel plates by hydraulic or power system; size and power, etc., must be big system; Lowmoor steel; milk apparatus.



RECLAIMING YAZOO DELTA LANDS, MISSISSIPPI, BY DRAINAGE.

## Millions for Good Roads in All Parts of Tennessee

MANY SCENIC LINES UNDER WAY IN MOUNTAIN SECTIONS—CONNECTING  
UP COUNTY-SEATS OF STATE—BUILDING LINKS IN NATIONAL HIGH-  
WAYS—IMPORTANCE OF ROAD MAINTENANCE NOW RECOGNIZED.

[Special Correspondence Manufacturers Record.]

Knoxville, Tenn., July 23.

Tennessee is entering upon a new and great era of road building and, what is of equal importance, of road maintenance, due to the action of the last Legislature, which met in January, whereby it gave to the Tennessee Highway Department an annual one-mill tax income. Two years previously the Legislature had established the Highway Department and given it an income from automobile tax, which amounted to only \$20,000, merely enough to enable the department to act in an advisory manner to counties in road matters, and to buy a limited amount of oil for itself, and also for counties, at a price that counties could have bought it individually.

The Department Commissioners are Arthur Crownover, Winchester; W. H. Crox, a successful farmer of Cleveland; Tom C. Rye, Governor of the State; Chas. E. Ferris, dean engineering department, University of Tennessee, Knoxville, and Dr. A. H. Purdue, State Geologist, Nashville, Tenn. It can be said to the credit of the department that all members have shown the keenest interest in their work and are inviting the views and co-operation of the public.

In charge of the actual construction and office work of the Commission are J. J. Murray, secretary; A. M. Nelson, State Highway Engineer, and O. M. West, chief clerk. By the recent act of the Legislature the department receives an annual income close to \$700,000 for use on designated State-aid roads, and the first appropriation made by them apportions one-third of this amount to each of the three grand divisions of the State, East, Middle and West Tennessee, the State being naturally thus divided by topographical features. This tax is to be assessed this year, collection of which would be begun in January of next year, but the department was authorized to issue short-term notes at any time to anticipate its income. In addition, the department is due from the Federal Government—Tennessee's portion under the Bankhead good-roads bill—\$118,000 for 1916 and \$218,000 for 1917, and for the remaining three years during which this bill is effective will receive an amount increasingly large each year on the 30th of June.

This \$700,000 is to be applied on a system of designated State-aid roads, and the policy of the Commission seems to be to adopt a county-seat to county-seat plan. The act appropriating the \$700,000 provides specifically that at least \$25,000 of State and Federal aid, or either, must be spent in each of the 96 counties of the State within the next four years, upon formal application by proper authorities, but in all cases the county applying for this or additional sums must set aside a fund for the proper maintenance of State-aid roads after they are built.

Under the Bankhead bill, before a State can receive Federal aid it must submit a well-defined plan or system of roads upon which this aid is to be applied, and this plan must be approved by Federal authorities. Furthermore, these roads must be maintained either by State or county funds, while the policy of Federal and Tennessee authorities is to place their aid where it will be supplemented a dollar-for-dollar expenditure by the counties in which spent.

All State-aid roads must meet a standard required by the State Highway Department, while all Federal-aid roads in the State must meet the State and Federal requirements. The standards of construction and maintenance thus required, it will be agreed by all familiar with road conditions in Tennessee, are fully as important as the financial aid given, for vast sums of money have undoubtedly been improperly and incompetently spent in years past.

In planning a Federal-aid road system for the State the general policy was followed of giving two main routes between the principal cities of the State, and to connect at State lines with other Federal-aid roads and through trunk lines, such as the Dixie Highway,

the Lee Highway and the Southern National Highway. This Federal-aid system includes two routes from Bristol, on the Virginia border, to Knoxville; two to Chattanooga, two from Chattanooga to Nashville, and two from Nashville to Memphis.

The first road to receive State and Federal aid is what is known as the Memphis-to-Bristol Highway, running from Memphis to Nashville, to Knoxville, to Bristol, and the eastern route of the Dixie Highway between Knoxville and Cumberland Gap, and the western route between Nashville and Chattanooga. Only 78 miles of the Memphis-to-Bristol Highway remains ungraded or unmacadamized, and as practically none of this is in East Tennessee, this end of the State will have its aid applied on the Dixie Highway and on a through line to North Carolina. A substantial sum was to be applied in the mountain county of Marion, on the Dixie Highway, this county adjoining Hailton, of which Chattanooga is the county-seat, but because Marion failed to vote road bonds at its July 2 term of court, it is now reported that the Dixie Highway will be diverted from Winchester via Grundy county to Chattanooga.

A highly important link of road from Newport to the North Carolina line, on to Asheville, was designated for Federal aid, but not until next year, but a new and also scenic line from Knoxville via Sevierville over into Swain county, North Carolina, and on to Asheville has been projected, and has received the informal support of members of the Tennessee and North Carolina Highway Departments officials of Sevier and Swain counties. This would make a magnificent route, and the above parties pledged themselves unofficially to have the road completed before the end of 1918. From Swain county this road also branches south to Atlanta.

The Dixie Highway from Knoxville to Chattanooga is completely macadamized, while all funds are available and work is being pushed on the completion of the macadamizing from Knoxville to Cumberland Gap. Between that point and Cincinnati there only remains unmacadamized the road through Laurel and Rockcastle counties in the mountains of Southeastern Kentucky, which are without funds to complete their parts. However, private subscriptions and from organizations amounting to \$100,000 are now being taken by action of the directors of the Dixie Highway Association, under the supervision of Berea College officials, to complete these links before fall of this year. If this is done, an all-the-year road will be open from Chattanooga, Knoxville, Cumberland Gap, Lexington and Cincinnati north.

Ninety per cent. of the Dixie Highway from Michigan and Chicago to Florida is complete, but the sand-clay roads of Georgia did not hold up under the trying conditions of last winter, and the making of the Dixie Highway a permanent road of brick, concrete, asphalt or other substance is now being agitated.

Of all sections of Tennessee none is more active in building roads than is East Tennessee, Greene and Washington counties having recently voted a combined sum of \$1,250,000, while other county bonds run the total now available and being spent into several millions.

### Cottonseed Meal Legally Defined.

Fort Worth, Tex., July 21—[Special.]—Many of the leading stockmen, including cattle, sheep, hog and goat raisers of the State, attended a recent conference here to consider the action of B. Youngblood, director of the State Agricultural Experimental Station, in forbidding the registration under the name of a "cottonseed meal" of a cottonseed product which contains an excess of hulls. The meeting was called by Mr. Youngblood upon request of C. C. Littleton, president of the Texas Cot-

tonseed Crushers' Association. Mr. Littleton and many other members of this organization were also present.

It was stated by Mr. Youngblood that under the provisions of the State feed control laws there was nothing left for him to do but issue and enforce the ruling as to cottonseed products, which was the basis of complaint. After the matter had been thoroughly discussed the following resolution was unanimously adopted:

We, the undersigned, acting for and in behalf of the Texas Cottonseed Crushers' Association and the Cattle Raisers' Association of Texas, have come to the following understanding with the Feed Control Service:

It is agreed that the following shall be the definition of cottonseed meal:

"Cottonseed meal is composed of the decorticated kernels of cottonseed, free from excess of hulls and other foreign materials."

It is further agreed that the following shall be the standards for the various grades of cottonseed meal and cottonseed feed which may be offered or exposed to the trade for sale in this State:

Choice cottonseed meal shall contain not less than 48 per cent. of protein, not less than 7 per cent. of fat and not more than 9 per cent. of crude fiber.

Prime cottonseed meal shall contain not less than 45 per cent. of protein, not less than 6 per cent. of fat and not more than 10 per cent. of crude fiber.

Ordinary cottonseed meal shall contain not less than 41 per cent. of protein, 6 per cent. of fat and not more than 12 per cent. of crude fiber.

Cottonseed feed No. 4 shall contain not less than 41.20 per cent. of protein, not less than 5 per cent. of fat and not more than 14 per cent. of crude fiber.

Cottonseed feed No. 5 shall contain not less than 38.50 per cent. of protein, not less than 5 per cent. of fat and not more than 18 per cent. of crude fiber.

Cottonseed feed No. 6 shall contain not less than 36 per cent. of protein, not less than 5 per cent. of fat and not more than 22 per cent. of crude fiber.

Cottonseed cake shall correspond to cottonseed meal in composition and as to standards.

It is understood that the standards for cottonseed feeds Nos. 4, 5 and 6 shall be the same, whether ground or cracked.

### Why There Should Be No Reprisals for Germany's Atrocities.

H. A. McGUSTY, Enterprise, Miss.

After every aerial raid on London there follows in our and some of the English papers a demand for reprisals for the butchering of German civilians in revenge for the murdered women and kiddies of England.

In this war many a gallant young Englishman has died, and so far, thank God, they have gone to their Maker with clean hands.

Would reprisals pay? The English have their good points and a certain bull-dog tenacity that will win this war, but as woman killers and baby butchers they are not in it with the Germans.

Again, though a raid into a crowded republic like England might logically be expected to produce a feeling of horror and dismay amongst the electorate that, though it has not done so yet, might be hoped to produce a clamor for peace, what effect could the slaughter of the women and children of the "hoi polloi" have on the German Government? "Vell, vell," the Kaiser would say, "How many vimens you say was killed? All bourgeois, peasant and working class peoples, yes? Vell, make soap of them if they're fat. That is just that many bombs that did not fall on my soldiers."

No, reprisals would be foolish.

If I am engaged in a fight with another man and he whirls round and kicks my wife, surely the logical thing for me to do is not to hunt up his wife and kick her, but to continue to hit him carefully on the nose with all the force, energy, industry and perseverance that in me lies.

### India Needs Iron and Steel Products.

G. MUKERJI & Co., 98 Clive Street, Calcutta, India.

We are interested in iron and steel products for our market. If your people are interested we will send specifications and orders according to our requirements. We believe arrangements can be made for shipments by way of the Pacific coast, thus minimizing freight charges and war risks. (Specifications of hoop iron, steel plates, galvanized pipes, wrought-iron gaspipe, nuts, bolts, galvanized corrugated iron sheets, plain sheets, galvanized wire, wire netting, etc., in file in office of MANUFACTURERS RECORD.)



## Copper Pyrites on Florida Coast Mentioned by Traveler Three Centuries Ago

By CHARLES E. CHIDSEY.

Pascagoula, Miss., July 10.

Only a few days ago, while reading that fascinating old English classic, "Hakluyt's Voyages" (Mansfield edition, 8 Vols.), on page 234 of Volume VI I found: "A notable historie containing foure voyages of certain French Captaines into Florida: Wherein the great riches and fruitfullnesse of the Countrey with the manners of the people, hitherto concealed and brought to light, written all, saving the last, by Monsieuer Laudonniere, who remained there himselfe as the French King's Lieutenant a yeere and a quarter: Translated out of French into English by M. Richard Hakluyt. London the 1 of may 1587." (In my quotation I have retained the old spelling and capitalization.)

The French soldier's narrative is a most interesting one, and is made by one who was a more than ordinary and intelligent observer of nature and things. After giving a detailed account of the fauna and flora of Florida, he says: "The Countrey is flat, and divided with divers rivers, and there fore moyst, and is sandie toward the sea shore. There groweth in those partes great quantitie of Pinetrees. There is such abundance of Crocodiles that oftentimes in swimming men are assailed by them; of Serpents there are many sortes."

This description fixes beyond a peradventure of a doubt that the land that he was describing was the Gulf Coast of Florida, and hence his further comment, and I may say discovery, has something more than a passing interest for those that dwell near the coast.

"There is found among the Savages," continues Laudonniere, "good quantitie of Gold and Silver, which is gotten out of the shippes that are lost upon the coast, as I have understood from the Savages themselves. They use traffic thereof one with another. And that which maketh me rather believe it, is that on the coast toward the Cape, where commonly the shippes are cast away, there is more store of Silver than toward the North. Nevertheless they say, that in the Mountaines of the Apalatey there are Mines of Copper which I think to be Golde."

This passage shows that Laudonniere was not an ordinary newspaper scribe who writes down all that he sees or hears without differentiating between fancy or fact, but a philosophic traveler who carefully criticizes all that is told him and distinguishes truth from fiction. Now, what the Indians found in the "Mountaines of Apalatey" was probably "copper pyrites."

"Copper is, however, also often met with in the form of sulphides," says D. Mendeleeff, Chemistry, Vol II, page 422. "The sulphides of copper generally occur in chemical combination with sulphides of iron. These copper-sulphur compounds (copper pyrites, variegated copper ore) generally occur in veins in rock gangue." Then in note 3 he adds: "Iron pyrites (bi-sulphide of iron) very often contains a small quantity of copper sulphide, and in burning the iron pyrites for sulphurous anhydride the copper oxide remains in the residue, and from which the copper is often extracted with profit. For this purpose the whole of the sulphur is not burnt off from the pyrites, but a portion left behind in the ore, which is then slowly ignited (roasted) with access of air. Cupric sulphate is then formed, and is extracted by water better and more frequently done, the residue from the roasting pyrites is roasted with common salt, and a solution of cupric chloride, obtained by lixiviation, is precipitated with iron." Then again, on page 344 of the same volume, he writes: "The most widely-diffused terrestrial compound of iron is iron bi-sulphide, or iron pyrites. It occurs in the formations of both aqueous and igneous origin, and sometimes in enormous masses. It is a substance of greyish yellow color, with a metallic luster." And in a note to this passage he says: "Iron pyrites (especially that containing copper which is extracted by roasting) is now chiefly employed for roasting as a source of bioxide of sulphur for the manufacture of

sulphuric acid; but the remaining oxide of iron is perfectly suitable for smelting into pig-iron, although it gives a sulphurous pig-iron (the sulphur may be removed by subsequent treatment with the aid of manganese of iron in the Bessemer process). The great technical importance of iron pyrites leads to its sometimes being imported from a great distance; for instance, into England from Spain." Now it is probable that the Indians found a deposit of this pyrites which roasted in their fires left in the ashes small nuggets of copper, as they reported to the French captain.

He states that it is in the "Mountains of Apalatey," which are no doubt the same as the present Appalachicola, a word in the language of the Hitchiti Indians, means "the people on the other side\*," probably the other side of a river. The narrative of Laudonniere therefore possesses something more than mere literary value, for it gives indubitable testimony that somewhere in the hills of Florida, where the Apalatey or Appalachicola Indians once dwelt, or its vicinage, there is a deposit of iron pyrites containing copper, if not of copper, which may be very valuable for its sulphur, iron or copper that it contains. The proper thing to do is to make an investigation of this matter and ascertain as nearly as possible the location of this deposit and its extent if it is commercially important. This is a matter that requires a painstaking investigation.

Right here in my mind's eye I can see some "famous expert" or "great editor" giving me a deprecatory smile and waive of the hand, and suggesting I waste not time and space in rehearsing old tales of long-forgotten travelers, as they are of no value. Not quite so fast. The men who wrote the narratives found in "Hakluyt's Voyages" are far better authorities upon the lands they visited than the "experts" who afterwards visited and pretended to give a "scientific account" of their mineral potentialities. On page 240 of the same volume we have the narrative of: "The course which Sir Francis Drake held from the haven of Guatulco in the South Sea on the backe side of Nueva Espanna to the Northwest of California as far as the fourtie three degrees; and his returne backe along said Coast to the thirtie eight degrees; where finding a faire and goodly haven etc hee tooke possession thereof in the behalfe of her Majestie, and named it Nova Albion." "Our general called the Countrey," says the narrator, "Nova Albion for two causes; the one in respect of the white bankes and cliffes, which ly towards the sea; and the other, because it might have some affinity with our Countrey in name, which sometimes was so called. There is no parte of the earth here to bee taken up, wherein is not some special likely hood of gold or silver."

That was written in the Bay of San Francisco on the 16th day of April, 1579, and first published in 1587, and yet, in spite of this positive statement of the existence of gold and silver in California, gold was not rediscovered until 270 years later, and then by an accident. Drake's narrative was the "tale of a traveler," and not worthy the attention of serious-minded men. Three hundred and thirty years have elapsed since the announcement of the existence of copper or copper pyrites in Florida to the date of writing this letter, and should investigations show that such a deposit does exist, it is to be hoped that justice be done and honor given to whom honor is due, M. Laudonniere and M. Hakluyt, for had it not been for their labors in the field of geography it might have lain hidden for many centuries more. Let us give them the honor that is theirs, though they have been in their graves many centuries, and not follow the course of some Southern journals, good road boosters, commercial organizations, which deliberately stole the journalistic thunder of the MANUFACTURERS RECORD on the "Military Highway Around the Nation" without so much as mentioning that publication. This is a level to which I do not care to sink.

\*I am indebted to Mr. James Mooney and Dr. John R. Swanton, ethnologists in Bureau of American Ethnology, for the etymology of the Indians' names used in this and other articles in the MANUFACTURERS RECORD.

### GOVERNMENT HUNTING FOR POTASH.

United States Geological Survey Announces Plans for Country-Wide Search for Mineral Deposits.

San Antonio, Tex., July 20.—[Special.]—That the United States Geological Survey, acting in conjunction with the geological departments of Texas and other States, plans to inaugurate a country-wide search for new deposits of minerals and mineral substances is shown by a letter which Congressman James L. Slayden of San Antonio has just received from George Otis Smith, director of that branch of the Federal Government. Incidentally, this letter contains the latest information in regard to the results so far obtained in the work of exploration for potash in the Panhandle of Texas. It reads:

"You will be interested to know that we contemplate active co-operation with State geologists, engineers and the staffs of universities, to the end that no opportunity be lost to promote the efficient development of existing mineral deposits and the discovery, if possible, of such new deposits as are particularly valuable in the prosecution of the war. A census of the country with such co-operation in view is contemplated.

"It is planned to study the mercury deposits of the United States, and naturally the mines at Terlingua will receive attention. An investigation of the manganese deposits will also be undertaken, and already parties are engaged in preliminary field studies outlining areas wherein it may be possible to pursue more intensive exploration, not only in the hope that increasing production may result, but that perhaps new discoveries may be made. Such deposits in Texas as seem to promise profitable exploitation will share in these field studies.

"The unprecedented demand for oil will stimulate search for this fuel, and investigations of oil and gas structures in East Texas will be continued and carried to completion, and reports issued as promptly as possible. Of similar nature is a study of distribution, nature and origin of the salt domes of the Coastal Plain which we contemplate undertaking. It is hoped that these studies will not only throw light on the origin of the salt, sulphur, oil and gas associated with the domes, but establish principles underlying their areal distribution in the Coastal Plain.

"The cretaceous rocks in counties bordering the Rio Grande will be examined, if possible, to locate oil and gas structure and certain coals of the State will be studied, with a view to preparing later a general State report.

"There is in preparation a paper on the general geology and water resources of East and South Texas.

"The geological survey, as you know, has undertaken broad investigations in search of potash salts, and exploration by drilling has been carried on for some time. Such drilling near Cliffside, in Northwest Texas, has already penetrated thick beds of common salt, and it is hoped that potassium salts may be encountered. This drilling will be actively continued if present plans mature. As you are aware, the discovery of potash salts in such geologic relations would prove of great value, particularly at this time.

"There are certain spring deposits near Toyah, Reeds county, apparently containing alunite, a mineral valuable for its potassium content, and the green sands near San Antonio and in the Llano-Burnet region also contain a certain percentage of potassium salts. It is very probable that an examination will be made of these deposits to determine if present extraordinary conditions will warrant their exploitation.

"The sulphur deposits of Texas have already received some field attention, and the survey will keep in touch with developments and needs in this field."

### New Schieren Machine Belt Factory.

Manufacturing will begin this week in the new plant of the Charles A. Schieren Company of New York, built as an addition to its tannery at Bristol, Va.-Tenn. The buildings are entirely completed, and the equipment of machinery is being installed for manufacturing the highest grade machine belts, the greater portion of which products will be shipped to Southern plants. This plant will have a daily capacity of 24,000 linear feet of belting.

## Reforestation as a Solution of South's Cutover Land Problem

By STANLEY C. ARTHUR, New Orleans, La.

"One way of solving the cut-over land problem of the South is to give the land back to the evident original intention of the Creator, that of growing trees, second growth pine on the cut-over land of the South." This is the gist of the statement just made by the Louisiana Department of Conservation, through Commissioner M. L. Alexander, on the result of the experiments that are being now made on the State forest reserve at Urania, an area of 32,000 acres given over for 40 years to reforestation by natural methods.

The findings of the State department are backed up

unsuited to agriculture. A report by Marbut of the United States Department of Agriculture estimated that the rough or stony land unfit for cultivation amounted to 20 per cent. of the present area of unimproved lands in the Coastal Plains region of the South, excluding alluvial bottom."

The South, Professor Chapman goes on to state, cannot reasonably hope to bring under cultivation a greater per cent. of its surface than the rich agricultural States North, this after granting the most rapid agricultural development possible. Iowa still has 17

sibilities were suggested along the lines of closer utilization in manufacture, they would receive careful attention.

But when faced, as they are now, with the possibility that a certain proportion of these lands may remain on their hands indefinitely, the problem of making the land both productive and salable may bring about a very different attitude.

The production of second growth timber should not be viewed as a substitute for farming on any soil needed for cultivation, but as a means for making the property carry itself as an investment pending future disposition, or as a permanent use for land evidently too rough for agriculture. The owner should compare his future status in the one case with his cut-over lands lying barren, fireswept, and with impoverished soil conditions, incurring an annual loss from taxes, and in the other, with these same lands protected from fire and producing a crop of young pine which is growing toward a market value and at the same time enriching the soil. It is not a question of waiting 40 to 50 years for income. The reforested land in a very few years shows the greater value, and this difference in value grows by leaps and bounds with every five-year period. The agricultural value of the land is not lowered by the presence of the second growth. Land will sell just as readily for this purpose as if ravaged by fire and grown up to thickets of worthless scrub oak. Whatever advance in price of lands which may occur through increased demand will take place independently of the creation of timber values on these lands, and in addition to them.

These timber values will become negotiable in the next 20 years in the South, and it will come about that half-grown timber will be sold for its future value as surely as young livestock is sold. Second growth pine can be cut for lumber at 40 to 50 years. Some old field loblolly pine stands will cut 10,000 board feet, Scribner scale, at 25 years on good soil. A cut of 5000 to 25,000 board feet per acre at \$5 per M in the stump is worth \$25 to \$125 per acre. This fact will be recognized long before the stands are fully grown. As proof of this we have the prices paid for scrubby and bushy jack pine in Minnesota, and for small second growth in New England and elsewhere. As soon as the main body of old timber is gone—and this will be within 20 years in the South—these values will have become established, and purchases of half-grown pine will be made extensively by investors.

By that time another possibility of these young stands will be recognized, which is of especial value to the farmer or small owner. In second growth stands large numbers of trees never reach maturity, because they are crowded out by the increasing demands for space and light by the survivors. Starting with from 400 to 1000 trees per acre, not much over 150 trees can grow to saw-log size, and in old stands about 30 survive. The others die and rot or burn up. These trees can be removed for fuel or other farm purposes, yield-



ENTRANCE TO LOUISIANA'S STATE FOREST RESERVE AT URANIA, LA.

by the investigations made on the reserve the past winter by the senior class of the Yale Forest School, Prof. H. H. Chapman furnishing the conservation department facts and figures, measurements of growing trees, logging cuts, sawmill operations, soil conditions, thinnings and actual production of second growths. The outstanding feature of this report is that while the experiments are made on Louisiana soil that what has been learned applies to the whole South, and that the only reason Louisiana figures are used is that this is the only State in the Union where real reforestation is being carried on. Forest gardening is being practiced in other States, but nothing done approaches the extent of the Louisiana work.

According to the figures given out that there are 90,000,000 acres of cut-over land in the South and increasing at the rate of 10,000,000 a year. The problem that is now facing the owners of these lands is their disposition. A recent meeting at New Orleans, the Cut-over Land Conference, attempted to solve this vexing question, but the opinion of practical lumbermen seems to be that the problem was not solved down to the last point nor to their satisfaction.

"The task of actually clearing and bringing under cultivation all of these wild lands is too great to be achieved in several decades by the forces available," says Professor Chapman in his report. "This means that millions of acres will remain uncleared in this generation.

"The intensive use of lands for the raising of truck crops, such as strawberries, which make possible the draining and subjugation of stiff clay soils, will be confined by market and transportation conditions to a fairly small per cent. of the total area of such soils," he continues, "and will not begin to solve the problem for the cut-over lands as a whole. After every acre of soil adapted to some kind of agriculture has been put under cultivation there will remain a residue of land

per cent. of waste land, which is greater in other States. New York cultivates but 40 per cent. and New England farms less than half its land.

This residue of land, not yet cultivated or actually waste, will always be present. To deny the existence of this fact will not solve the problem. Someone must own the land, and the owners must eventually meet this situation. The method of getting rid of the land, either by permitting it to revert to the State for taxes or selling it for a nominal sum to speculators or land companies, has not found favor in the South.

A true economic solution, says the Yale Forest School expert, consists in an earnest effort to find out the possibilities of these lands for the production of income, not highly specialized income, made possible by exceptional economic factors, to be falsely generalized for areas to which it cannot apply, but for actual average existing conditions.

Of the three possible sources of future revenue, namely, agriculture, grazing and timber, the attention of landowners and of lumbermen is apparently concentrated on the first two to the exclusion of the last, and in spite of the fact that timber is the source of the entire income of the immense lumber industry of the South, the lumberman shrugs his shoulders when the possibilities of growing timber are mentioned, or takes a purely theoretical interest which he does not intend to apply in concrete form. There are several good reasons for this attitude.

To sum up, the average lumberman, who finds himself with cut-over lands on his hands, has so far dismissed the possibility of future revenue from second growth as an interesting but impractical theory. So ingrained and well bolstered is this opinion that, with one or two exceptions, none of these landowners has attempted to find out by actual trial what possibilities there might be in it, although investigations on a small scale would cost but a trifling sum, and if similar pos-



YOUNG LONG-LEAF SEEDLING ON LAND PROTECTED FROM HOGS AND FIRE.



ing a cord or more of wood per acre annually after the fifteenth year, and their removal stimulates the growth and improves the quality of the remaining stand. If the uncultivated portions of a farm are barren, this source of income is lost to the farmer. A still greater possibility is the turpentine crop.

In the South, if proper methods are followed at the time of cutting the old timber, not a dollar need be spent for planting to secure a second growth of pine. The question is one of leaving a few seed trees and of

sacrifices all prospects of future income from this source and commits himself irretrievably to agriculture, grazing or land speculation.

Purely on the basis of expediency, the policy of seed trees and natural reforestation should appeal with ever-growing force to such landowners as are willing to look at their problem from a broad viewpoint, and consider the future as well as the immediate present.

The day of the transient lumberman is passing. Like the carpet-bagger, he was out for what he could take

and enforce a law that will protect the industrious farmer and sheep-raiser from his more shiftless and careless neighbor. Some States have such laws, and why it is that all States do not have one is one of the questions that will only be solved when the high price of woolen garments begins staring us in the face. Already the manufacturers are having to look about for substitutes, and the dear people will be wondering why a suit or a dress wears out so quickly or does not retain its original shape and luster.

Our agricultural department hastens to throw a protecting arm around "King Cotton" when someone in the far South yells "boll-weevil," but the department of animal husbandry seems not to hear the call made in behalf of the defenseless sheep.

According to statistics, we in the United States produce about one-tenth of the world's supply of wool, while we consume about one-quarter of the world's supply. We import wool in enormous quantities from South American countries, from China, from Australia and from South Africa. Instead of this, if our sheep industry had the proper protection and encouragement we would in all probability be able to export some wool, and until there is a general realization of the vital part that wool plays in our every-day life and a concerted effort made to demand laws enacted and enforced that will protect our sheep from canine enemies there will never be a "Queen Wool" as a royal consort for "King Cotton."



GAIN IN ACTUAL WOOD SHOWN IN TREE THAT HAD BEEN SUPPRESSED FOR 100 YEARS OF GROWTH.

protecting the seedlings from destruction by fire or hogs.

On a tract owned by Henry Hardtner, north of Urania, which was "logged clean" in 1903, about eight trees per acre were left by the former operators, solely because they were so small that they were not considered worth taking. These trees were spike-topped, suppressed, crooked and scraggly runts, averaging 8 inches outside bark at  $4\frac{1}{2}$  feet from ground. Within two years practically all of these trees had started to put on a rapid growth, and for 12 years they have been growing an inch every four years. The average diameter has increased to 12 inches.

The board foot volume of the trees left at time of cutting, if scaled to a six-inch top by Scribner Doyle Log Rule, was originally 226 board feet per acre, but on account of crook, and the use of a larger top diameter, there was practically nothing worth cutting. This stand now scales 803 board feet per acre, or  $3\frac{1}{2}$  times its original volume, a gain of 250 per cent. in less than 15 years.

The trees that have made this gain averaged 100 years old when the stand was cut. These trees had been growing previous to cutting at the rate of one inch in 14 years, while the trees that were taken averaged an inch in seven years. Yet these stunted trees recovered immediately, and are now growing twice as fast as the average long-leaf pine. (A section of a stump of one of these trees is illustrated herewith.)

The average top diameter on the trees left 15 years ago at Urania was about six inches. In this time the top log has increased in size to between 9 and 10 inches, enabling the timber to be handled at a profit.

But the results obtained on this typical cut-over area were neither foreseen nor planned by the operators from whom, after logging, the land was purchased by Mr. Hardtner. The trees left were by no means the best trees to leave. Fully twice as good returns may be obtained by planning on the operation and before the timber is cut.

If fire is regulated, at the end of 15 years not only should the seed trees pay all expenses with interest to date, but the tract should be reproduced to a vigorous young stand. Thousands of acres of young short-leaf and loblolly pine of this age can be seen on the flat lands north of Urania, due to accidental leaving of seed trees and absence of fires. The same results with long leaf are possible by excluding hogs.

The opportunity for obtaining second growth pine at practically no cost occurs only at the time of logging the old stand, and failure to take advantage of this fact simply means that the owner deliberately or blindly

away with him, and took no thought of the communities in which he operated. A new spirit is dawning in the South, and the lumberman of the present and future looks beyond the day when the last saw-log is cut and the mill dismantled. He intends to remain as a citizen, and as such he can do no greater service for the future welfare of the South than to seriously undertake the study of the economic possibilities of second growth as a use for cut-over lands.

### Clothes and Meat Must Steadily Decrease if Sheep-Killing Dogs Continue.

CARL C. POINDEXTER of Chatham Manufacturing Co., Makers of Blankets, Winston-Salem, N. C.

Now and again spasmodic attempts are made to arouse the lawmakers to the point of passing a law to protect the sheep industry from the ravages of the sheep-killing dog.

Every one of the 100,000,000 people of the United States is more or less affected by the depredations of these worse than worthless dogs that, like other thieves in the night, go forth to raid some farmer's flock, scattering the helpless sheep over the field, dead or mangled. The farmer himself is powerless. He may persuade the owner of the dogs (if he can find the owner) to shoot them or dispose of them, but more often the owner refuses and dares the sheep man to do his worst.

Every person in our land wears some woolen clothing, and every one of us should be interested in protecting the source of our wool supply. It is partly on the account of the dog nuisance that we have had a decline of about 12 per cent. in our wool production in the last four years, and in our section those farmers who still kept a few sheep have been selling them to licensed butchers rather than have them butchered in the fields by mongrel dogs.

There should be sheep on a thousand hills, and there are tens of thousands of hills in our great Southeast that are too steep for cultivation. There are millions of acres of cut-over lands in our Southern States that are lying idle and could be profitably used as range for millions of sheep. There are, however, bountifully scattered over these hills and cut-over lands thousands of families whose principal possessions are a flop-eared mule and from one to a dozen flea-bitten hound dogs.

Considerable missionary work will have to be done to get such families as these to exchange the dogs for sheep. The quickest and most effective method will be to make

### The Coal Situation as Stated by a Coal Operator.

B. F. RODEN, President Roden Coal Co., Marvel, Ala.

I have long been impressed with your fair handling of many questions, and I am particularly impressed with your answer in your issue of July 19 to Mr. Buquo's letter on the coal situation.

There seems to be more misunderstanding in the country on the coal situation than on any other one subject. People are paying from two to eight times as much as in normal times for many commodities, yet they rise up in indignation when they are forced through economic conditions to pay from two to two and one-half times as much for coal as paid during the depressed period since 1907. The clause in the renewal of Mr. Buquo's contract evidently refers to a clause now carried by a great many contracts. This clause sets forth that a certain increase per ton shall be made above the contract price for every one-cent increase in the wage rate. This is made absolutely necessary for protection to the operator. In Alabama we have had 25 per cent. increase in wages since May 1, 1917. This is an increase in production, due to wages alone during this period, of 45 cents per ton.

Every employer of labor knows that when wages are increased 25 per cent. there is a decreased efficiency. For instance, with the same number of employes we are getting out only 70 to 80 per cent. of the coal which we did a year ago.

There has been such an enormous and rapid increase in the cost of production that every coal mine and manufacturing plant has been caught with a lot of low-priced business. Due to the decreased output on account of decreased efficiency of labor, shortage of cars, etc., there is an extremely small amount of free coal, or coal not contracted for. It is only reasonable that operators in renewing contracts will try to recover the amount they are losing on other old contracts. Our company is filling two contracts on which we are losing \$1.15 per ton and several others on which we are losing from 40 to 90 cents per ton. It does not take very much coal moving on such contracts to reduce the apparent "enormous profits" from other contracts made recently.

There is a very important item of cost in coal production that many people overlook; that is, the cost of a lost day on account of railroad car shortage or other unusual causes. A company whose cost is \$2 a ton on 25 working days a month will be easily increased 25 cents a ton if they lose two days a week. A year ago mines could work six days a week; now a mine is extremely fortunate that can average four days a week.

L. E. Stenger, H. A. Varner, F. M. Varner and others have incorporated the Texas Waste Mills, Houston, Tex., with a capital stock of \$10,000.

# The Iron, Steel and Metal Trades

## ONE-PRICE-FOR-ALL THREAT CAUSES STAGNATION IN STEEL AND IRON.

### Buyers Hold Off, Awaiting Developments Before Making Further Commitments.

New York, July 23—[Special.]—As a result of the conference between the Government authorities and representatives of the steel industry at Washington last week, and more particularly because of the frank statement of President Wilson that there should be no distinction between the prices to be asked of the Government and those to be demanded of the private consumer, the steel and pig-iron markets have come to a standstill. There is a relation between the two influences, for the expectation that prices are going to be regulated is evidently based more upon observation than upon definite information. The quietness of the markets, in other words, has been taken as evidence that there is to be regulation.

President Wilson's statement has created consternation in both the steel and iron trades, but there is a disposition to conclude that the statement is not to be taken literally. The regulation of both prices and deliveries was foreshadowed, but with the stagnation now existing in the markets it is quite possible that they will adjust themselves without interference. The present dullness in steel has been even more pronounced this past week than is the case in ordinary dull times. In the latter condition there is always a moderate volume of business being entered, because buyers have not bought ahead. Now, the condition is that the steel mills are all filled with orders for months ahead, some of them into the new year, while the blast furnaces are sold up almost completely for the remainder of this year, with perhaps more than one-half or more of their output sold for the first half of the new year.

After a long period of heavy, almost panicky, buying, consumers have become reserved, and are awaiting developments before making further commitments of importance. In the meantime, they are urging better deliveries on orders already placed. The pressure for steel deliveries, in fact, is as great as ever, the only change in the market being that buyers are not concerned with future forward deliveries.

While President Wilson's "suggestion" (?) is not taken as being feasible in the trade, buyers have taken the idea much to heart, and are confirmed in their determination to await developments. In the course of time a new market will be developed, and meanwhile transactions will be confined to odd lots for early shipment.

Government orders for steel products last week continued to be distributed, and as far as possible in relation to the productive capacity of the various mills. Most of the prices assigned were tentative in character, and were subject to revision when the parties in interest have the Federal Trade Commission's presentation as to cost of production before them. The rate of production in the steel and iron industries is decidedly unsatisfactory. The frequent roll changes required to fill rush orders from the Government are cutting down operations at many plants, and this adds to the decrease of production by lack of labor and cars. Still further curtailment is feared when men are taken under the selective draft, and when the railroads are called upon to move the troops of the new national army, as well as construction material and supplies to the cantonments.

The tinplate mills are supplying all the tinplate that could possibly be used in packing the perishable food products by August 1, and they are somewhat ahead of their schedule, as they have already been able to increase shipments to ordinary consumers. The Government is likely to call shortly upon the tinplate mills to supply some large quantities to its allies. The Italian Mission, for instance, has ordered 100,000 boxes, which have not yet been delivered.

The steel market at present shows no signs of activity in the near future, a dead feeling prevailing all around. While there are some inquiries coming to the mills on finished products which the mills cannot possibly make, on the other hand the deliveries that the plants could fill bring no inquiries whatsoever. This is the case in every department of the steel industry, so that it is not

necessary to analyze or go into details. The absence of demand for regular deliveries is, and has been for some time, attributed to the causes already stated above. There is no question that if the mills were ready to sell large tonnages for regular forward deliveries they would not expect the prices that are now being quoted on early deliveries, but they have no basis upon which to quote lower prices, as there is no recognized market now but the prompt delivery one.

The pig-iron market was steadier in price last week than it has been any time during the history of the trade since the beginning of the phenomenal rise in prices a year ago. For the whole week there was not a single advance price recorded. The market, in fact, is somewhat easier in tone pending possibilities as the result of the coming investigation by the Federal Trade Commission. Business also slowed up considerably during the week awaiting the same momentous decision. There was a fair amount of inquiry for small tonnages of prompt and nearby delivery. The interest in shipments for the balance of the year is keeping up in a small way, but has come to a practical standstill so far as concerns delivery during 1918. The market is likely to be stiffened, however, by a heavy export demand now at hand.

A sale of resale of 3000 tons of Alabama iron to Japan came to light at the end of the week for shipment this year. The Sunrise Kingdom is also in the market for two lots, each of 2000 tons, of Alabama iron, and one of 5000 tons for this year's shipment. Italy is in the market for 3000 tons low phosphorus, 2000 tons Alabama foundry and 6000 tons of Bessemer. South America wants about 1000 tons in small lots. Holland is bidding for 500 tons, and so is England.

The furnaces are practically all sold up for their production for the remainder of the year. For the first half of next year the Western Pennsylvania and Mahoning Valley furnaces are sold up to the extent of 50 or 75 per cent. of their output. For the second half of next year the sales represent only a small percentage of the output.

#### (Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$95.00—\$100.00
Open-hearth billets (nominal).....	95.00—100.00
Open-hearth sheet bars.....	105.00—110.00
Bessemer sheet bars (nominal).....	105.00—110.00
Forging billets.....	125.00—135.00
Wire rods.....	90.00—100.00
Rails.....	60.00—61.00

#### (Dealers' average buying prices for pound lots.)

Tank plates.....	\$9.00—\$10.00
Steel bars.....	4.50—4.75
Refined iron bars.....	5.00—
Steel hoops.....	5.50—6.50
Cold-rolled strip steel.....	9.00—9.50
Sheets, No. 28 gauge.....	8.00—9.00
Galvanized sheets.....	10.00—11.00
Wire nails.....	4.00—
Cut nails.....	4.00—
Plain fence wire, base.....	3.95—
Barb wire, galvanized.....	4.65—
Railroad spikes.....	5.00—

#### FIG-IRON.

Bessemer, Pittsburgh.....	\$55.95—\$67.95
No. 2 foundry.....	53.95—55.95
Basic, valley.....	53.95—54.95
Basic, Philadelphia.....	52.75—
No. 2 foundry, Northern.....	52.75—55.95
Low phosphorus.....	53.00—55.00
No. 2 foundry, Buffalo.....	52.00—56.00
No. 2 South, Cincinnati.....	47.90—52.90
Northern foundry, No. 2 Cleveland.....	54.30—55.30

#### SCRAP-IRON AND STEEL.

Heavy melting steel.....	\$35.00—\$38.00
Old steel car wheels.....	42.00—44.00
Steel car axles.....	55.00—56.00
Iron car axles.....	54.00—55.00
Low phosphorus.....	45.00—47.50
No. 1 cast scrap.....	31.00—32.00
Heavy cast scrap.....	29.00—30.00
No. 1 railroad wrought.....	40.00—42.00
Cast borings.....	20.00—21.50
Machine-shop turnings.....	19.00—20.00
Railroad malleable.....	31.00—32.00

### Southern Market Waiting on Action by the Government.

Birmingham, Ala., July 23—[Special.]—There is no weakening of the pig-iron market in the South, notwithstanding that the lull in buying heretofore reported continues. The quotations on the open market are still around \$48 per ton No. 2 foundry for delivery during next year and \$50 for this year delivery, wherever there is any iron. Almost all of the iron companies in the

Birmingham district are out of the market entirely, and meeting the demands only from regular customers or from those who want small lots—a car or so, immediate delivery—for which premiums are being paid. The sale of a car lot or so of 3 per cent. silicon iron is announced on a basis of \$51 per ton, while some little special brand and special analysis irons also went out during the last few days on a level of \$50 and \$51 per ton. Every attention is being given to production and delivery, and great results are again noted. The expectations are that the July production of iron in Alabama will considerably exceed that of June, and the aggregate tonnage may be the banner output for the State.

Inquiries are slow again. The lull and the lack of inquiries is accounted for by the belief that the Government will regulate the iron and steel market to such an extent as to bring about a complete modification of prices.

Raw material supplies are sufficient for furnace production. The advance in the freight rates on raw material for furnaces, intra-district business, is now in effect, and five cents per ton is added to the raw material haulage, which will affect the general costs of iron producing.

There is some apprehension that failure to recognize the union among the miners and mine workers in the coal-mining section may bring about contention and possibly a strike. After working for several weeks organizing locals of the United Mine Workers of America, getting upwards of 15,000 to 20,000 members, it is asserted, a call has been issued for a State convention to be held in Birmingham Monday, July 30, at 10:30 A. M., to discuss and formulate a wage scale and transact other business. An invitation will be sent the coal operators for a joint conference, when the wage scale shall have been adopted in the convention, for the purpose of bringing about an agreement thereon and also to provide for a recognition of the union. Operators assert that they will not attend the conference and will not recognize the union; that the open-shop plan has been in effect in this State for years and has been a success, and that the highest wage ever paid for mining coal is now in effect. The result of the failure of the operators to meet the miners and mine workers and recognize the union remains to be seen. Inasmuch as a delegation of operators of the Birmingham district are in Washington this week at the conference at which the distribution of the demands of the Government for fuel is being made, Alabama being expected to furnish more than 800,000 tons of coal, it is believed that the Government will step in should a strike in this district be ordered. A number of miners and mine workers who have been prominent in the organization of the union have been discharged by some of the corporations, but there is such a need for men that the discharged men are simply moving from one camp to another. At best, the miners and mine workers are not giving full time to the production of coal, and while there is a larger output now than at any time in the history of the industry in this State, it is a fact that the production of coal could be larger. The fuel and coke supplies in this district are not so voluminous as to bridge over a cessation of operations for a week without more or less injury to the iron and steel industry.

J. W. McQueen, vice-president of the Sloss-Sheffield Steel & Iron Co., who has been trustee for several years for the old Jenifer furnace company, in bankruptcy, has tendered his resignation as the trustee, and W. Aubrey Thomas of Niles, O., has been named as his successor. Milwaukee capitalists are principal owners of the properties, and recently an inspection was made of the holdings by three men from that place. The Jenifer furnace is one of the oldest iron propositions in this section. The furnace has been there since 1863. It passed several hands, and has not been in operation for years. It is understood that the new receiver will take steps looking to a reorganization of the company and the rehabilitation and operation of the furnace.

W. L. Klutz, formerly of the Central Coal & Iron Co. at Holt, Ala., has taken charge of his new position as general manager of the Sheffield Coal & Iron Co., and intends to place the furnaces at Sheffield in condition and operate them. The fact that both the Sloss-Sheffield Steel & Iron Co. and the Woodward Iron Co. have been shipping iron from Sheffield via the Tennessee River and other streams to Metropolis, Ill., and even up the canal to Chicago, not only obtaining a lower freight rate, but also getting service in the delivery of iron, along with the high prices for iron, are the incen-



tives for attention to furnace propositions around Sheffield.

Actual work on the developments of the Tennessee Coal, Iron & Railroad Co. at Fairfield is in hand, Chas. J. Barr, former general superintendent at the Ensley steel plant, to be in charge of operations. Material for new development work is now being placed. Extension of the Birmingham Southern Railroad, subsidiary to the Tennessee Coal, Iron & Railroad Co., is discussed, the railroad to furnish transportation not only for the big construction work, but also for the several mills when the development work is completed. Negotiations are reported on for an extensive tract of land adjacent to lines of the Birmingham Southern, and the rumor prevails that this will be the site for further developments. The location price is reported to be around \$50,000.

Machine shops and foundries are working steadily, and in some plants there is double turn on, day and night shifts. The cast-iron pipe plants and the soil-pipe works are active, and specifications will require a large quantity of pipe to fill. Shipments are exceedingly heavy from the pipe plants. Government business, especially in sanitary pipe, when the work at the several cantonments in the Southern territory is under way, to be very extensive.

The old material market in the South is again in a drooping condition, and further reductions in prices are noted. Some of the dealers in scrap-iron and steel are in St. Louis, Chicago and other centers investigating the situation. Contracts are in hand with dealers in old material here that will call for delivery of a large quantity of the product in the future. The demand for scrap is not urgent, and consumers are demanding further concessions in price.

Quotations for pig-iron and old material in the South are as follows:

PIG-IRON.

No. 1 foundry and soft.....	\$48.50 to \$50.00
No. 2 foundry and soft.....	48.00 to 50.00
No. 3 foundry.....	47.50 to 48.00
No. 4 foundry.....	47.00 to 47.50
Gray forge.....	46.00 to 47.00
Charcoal.....	55.00 to 60.00
Basic.....	48.00 to 50.00

OLD MATERIAL.

Old steel axles.....	\$33.00 to \$35.00
Old steel rails.....	27.00 to 28.00
No. 1 wrought.....	30.00 to 31.00
Heavy melting steel.....	21.00 to 22.00
No. 1 machinery.....	22.00 to 23.00
Car wheels.....	26.00 to 27.00
Tramcar wheels.....	23.00 to 24.00
Stove plate.....	17.50 to 18.00
Shop turnings.....	13.00 to 14.00

DEPRESSION IN ALL METAL MARKETS EXCEPT TIN.

Transactions Comparatively Small Because of Price Uncertainty—Copper, Lead and Spelter Quiet—Tin Improves.

New York, July 23.—[Special.]—The metal trades are waiting for some definite action by the Government as to price, and for that reason transactions last week were on a comparatively small scale. Until the restraint of existing uncertainty is removed no aggressive market activity can be expected.

If it is fair to judge a market by quotations when there is no business doing, then it is fair to say that the bottom of copper has been seriously punctured and the prices are pouring out. In judging the present market as based on conditions last week there are two facts to be considered. The first is that no one is buying copper, because of fear that it is going lower, consequently there are no actual sales upon which to base a definite conclusion. There are plenty of prices, however, which indicates that if anyone wanted to purchase copper last week he could have had it at a figure which would have looked exceedingly attractive a fortnight ago. The second fact to be considered is that because prices now look so attractive they may not compare so well with the future, and so buyers are proceeding very cautiously.

There are some bullish features to the market for red metal, however, despite the present stagnant conditions. Reports received last week by prominent producers here from Montana and Arizona are to the effect that the strike conditions at the copper mines in those States assumed serious proportions and their output has been considerably decreased by shutdowns. It is believed that unless operations are fully resumed in the near

future supplies may fall short of requirements. With the present outlook at sources of production, the downward tendency of the market presents an unusual feature of the situation. If the law of supply and demand is allowed free play, a reversal of market tone would appear to be the natural development to expect, according to leading factors in the trade.

The lead market was very quiet last week. Prices declined and the tendency was generally easier. As in copper, there were some bullish factors, however. Labor troubles in the Flat River district of Missouri have, from all accounts, assumed serious proportions. Most of the mines have been closed, and those shafts now operating are doing so on a greatly reduced shift. The quantity of ore affected by the troubles is about 15,000 tons. The principal producers of refined lead continued to quote July and August delivery at 11 cents and are

now in the market for limited quantities of the metal. Independents have cut under this price by one-half to three-quarters cent.

The continued indifference shown by consumers of spelter had its effect on the market last week, and it gradually became weaker. The ore market, however, held firm. The present prices are not conducive to production of the metal, and a falling off may be expected.

Apparently dealers in tin are recovering their "nerve." Tin recovered last week in the principal distributing center, and was higher and stronger, with more business transacted than has been reported in some time. Inquiries last week indicated that there are buyers ready if only a stable market is assured. Arrivals of tin to date are 1925 tons, and stocks afloat comprise 3654 tons from the Straits Settlements and 75 tons from Singapore.

THE WEEK'S PRICES.

	Copper.	Lead.	Spelter.	Tin.
	Lake.	A. & R. C.	Independent.	
Monday, July 16.....	29.00-30.00c	11.00c	10.50c —	8.75 — 8.85c
Tuesday, July 17.....	28.00-29.00	11.00	10.50 —	8.67½ — 8.80
Wednesday, July 18.....	28.00-29.00	11.00	10.12½-10.37½	8.55 — 8.67½
Thursday, July 19.....	28.00-29.00	11.00	9.75 — 10.25	8.42½ — 8.55
Friday, July 20.....	28.00-29.00	11.00	9.75 — 10.25	8.42½ — 8.67½

Cotton and War Profits.

Extracts from letter by W. W. MORRISON.

Like any agricultural product, the cost of growing cotton is influenced so much by individual initiative and varying conditions of soil and climate that nothing very definite can be arrived at in the sense that the cost in the manufacturing industry can be ascertained. However, by comparing the cost, at different periods, of the principal products consumed in its production with the price of cotton current in these periods, the cost of growing cotton can be arrived at with sufficient accuracy to be a fairly dependable basis for such calculations as the present instance requires.

The price of these products, current today, is compared with a period when the price of cotton ranged between 10 and 12 cents. These figures are taken from transactions concurrent with the periods named:

	Prices today.	Prices nine years ago.
D. S. ribs.....	\$0.23	\$0.06½ to \$0.07½
Bacon ribs.....	.25	.07½ to .08½
Corn.....	1.97	.60 to .65
Flour.....	12.75	4.50 to 4.75

Mules at time named brought \$125 to \$150; they bring now from \$200 to \$300. The advance in farm implements has been from 50 to 100 per cent. The cost of picking cotton is about double, and fertilizers more than double. Land values have probably advanced fully 50 per cent.

It is important to remember, in this connection, that the returns from labor have been materially reduced by the weevil, the records indicating that the labor necessary to produce 12,000,000 bales now would have produced something more than 15,000,000 bales before the coming of the weevil. This reduction in the returns from labor obviously raises the average cost of growing cotton as it relates to the crop as a whole. Reference, of course, is made here to the production, and not to the harvesting of the crop.

A careful analysis of these figures indicates that the cost of the commodities which enter into the production of cotton are today three times more than they were when prices ranged around 10 to 12 cents. Reasoning, therefore, from the normal relation of things, 25 to 30 cents if an unusual is not an unreasonable price for cotton. Or, in other words, this price does not traverse the logical relation which the price should bear to the cost of production. These conclusions are supported by the details covering the expenses and returns from a given acreage in cotton, which the lack of space will not permit giving at this time.

In view of these facts, it seems safe to assume that there will be no material decline in the price of cotton until there is a material decline in the price of those staple products that are consumed in its production. In this connection it is well to keep in mind that the main consumption of these products for this season will have passed by the first of August. So it is practically certain that the coming crop will be produced on this higher cost basis.

If a decline in the price of these products should come later on, it is not, therefore, likely to be reflected in the marketing of the crop that will be grown this

year. For the financial resources and trained intelligence of the cotton-producing interest, as has been rather conspicuously demonstrated in recent years, make it reasonable that any price not commensurate with the cost of production could and would be effectively resisted.

Summed up, it seems reasonable that the higher prices have come to stay through the balance of this season and through the next. Indeed, the logic of events points rather decisively to prices well above the levels of the past prevailing for an indefinite period. For it will not only take a permanent decline in staple products, but there must be also, in conjunction with such a decline, a great increase in the supply of cotton before any permanent decline in the price of cotton can logically be expected. It will probably take a succession of crops well above 17,000,000 bales to bring such a recession about.

New Orleans, La., July 20.

To Manufacture Pulp and Paper.

The Old North State Pulp & Paper Co., Wilmington, N. C., has increased its capitalization from \$125,000 to \$2,000,000, and wires the MANUFACTURERS RECORD that it is making preparations to build a paper mill with daily capacity of 100 tons. This corporation was previously chartered to manufacture pulp and paper from Southern timber. It has a 50-acre site on waterfront, and will build the plant in 50-ton units. W. H. Crocker is president and is understood to be considering details for buildings, machinery and other necessary facilities.

Electrical and Nail Machinery.

P. E. COSTOPOULO, Public Works Contractor, P. O. Box 366, Alexandria, Egypt.

The electric motors I require ought to be A. C. M. P.; 1 piece, 1½ horse-power, 100 volts, 40 periods; one three horse-power, 200 volts, 40 periods. The nail-making machines to be complete; that is, make nails from wire rods without necessity of other auxiliary machine.

Colombia Wants American Products.

TELMO VIVAS, Popayan, Cauca, Colombia, S. A.

I am desirous of entering into commercial relations with American manufacturing houses. There are many articles which I would like to introduce into my country. I would like to know of a firm making "rubber balls with whistles"; also interested in toys, mechanical novelties, optical and scientific goods, stationery, paper and office supplies.

The Gray Manufacturing Co., Gastonia, N. C., has increased capitalization to \$600,000.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### Street Railways Improvements at Kansas City.

The Kansas City Railways Co. will build an extension to its shops at the corner of 9th and Lister streets, Kansas City, Mo. Besides extending the building, the company will install additional machinery and hereafter will build all of its cars at these shops.

The company is also planning to erect a trainmen's building at 10th and Minnesota Ave., in Kansas City, Kans. This will have restroom, toilets and lockers.

At the Union Station in Kansas City, Mo., the railways company plans to extend the present projecting sheds southward to a point 85 feet from the station curb, where an outgoing and ingoing platform with shed will be built. Execution of this plan awaits the passage of an ordinance to authorize the construction of street-car tracks on the Union Station Plaza. However, an agreement has been reached between the Union Station Terminal Co. and the railways company on the question of payment on viaduct leading to the Union Station and to be used by the street cars. It is expected that the ordinance to authorize the tracks will be passed within two weeks, and then, as soon as necessary special work can be obtained, the tracklaying will begin.

The shed over the platform will consist of an ornamental glass and copper canopy on the plaza, and will resemble a train shed with open sides. It will be 100 feet long and 35 feet wide, covering the tracks as well as the passenger platforms. The sides will be closed in winter. By means of this proposed construction passengers will be able to go from the street cars into the Union Station wholly under cover.

The Kansas City Light & Power Co. is building an addition to its power plant on Kaw River, and also to its heating plant on Wyandotte street. Turbo-generators to the amount of 14,500 K. W. are to be installed at the light plant. The machinery has been bought and the additions to the buildings are about half completed.

### Better Depot Facilities at Fort Worth.

By an order of the Texas State Railroad Commission, the railroads entering Fort Worth are required to provide adequate union station facilities there, either by erecting an entirely new union station or by enlarging the station of the Texas & Pacific Railway. In addition to this road the lines affected are the Missouri, Kansas & Texas; St. Louis, San Francisco & Texas; Fort Worth & Rio Grande; Fort Worth & Denver City; International & Great Northern; Chicago, Rock Island & Gulf, and the St. Louis Southwestern. If it is decided to improve the existing station, the order says it must be done in accord with plans and specifications submitted by J. L. Lancaster, receiver of the Texas & Pacific Railway. Plans for this must be filed within 30 days, and if an entirely new union station is agreed upon, then within 40 days.

The Railroad Commission also ordered the Gulf, Colorado & Santa Fe and the Houston & Texas Central roads also to improve their joint station at Fort Worth and to file plans within a month.

### Lumber Railroads to Be Merged.

Several Louisiana lumber companies are considering plans to consolidate three so-called tap lines and two unincorporated lumber railroads into one common carrier corporation, and to make them as one system, which will have its Southern terminus at Kinder, connecting with the Iron Mountain and the Gulf Coast lines, whence it will utilize the present line of the Kinder & Northwestern Railroad, running north about 15 miles. New track will be built from the terminus to connect with the tracks of the Industrial Lumber Co., which reach Elizabeth in a distance of about 11 miles, with a branch to Oakdale of about 12 miles. Connection will be made at Elizabeth with the Santa Fe system, and at Oakdale with the Santa Fe and Iron

Mountain lines. Eight miles of the Industrial Lumber Co.'s tracks will be utilized north of Elizabeth.

New construction of 4½ miles from this point will connect the road with the railroad of the Louisiana Sawmill Co., which runs about 15 miles northeast of Glenmore, connecting with the Iron Mountain. From Glenmore it will use the present tracks of the Glenmore & Western Railroad, consisting of 11 miles north and east, to a connection with the Iron Mountain at Smith's Junction. From a point on this line a gap of 3½ miles to a connection with the Woodworth & Louisiana Central Railway will be covered by building new track, and by the last-named line connection will be made with the Iron Mountain at Woodworth, and with the Southern Pacific, the Chicago, Rock Island & Pacific and the Texas & Pacific at Lamouri. In addition to new construction, it is proposed to change from narrow gauge to standard gauge that portion of the Woodworth & Louisiana Central west of Woodworth, about six miles.

The complete line linked up will be about 95 miles long, and will have connections with six trunk lines at various points; it will also connect with the Red River & Gulf road at Bolton. A variety of routing will thus be afforded to the lumber mills and other industries, etc., on the line, which will enable them to choose the most direct route to various markets.

### A Railroad Plan Revived.

The recent revival of activity in connection with the plan to build the Central Carolina Railway from Lillington to Swansboro, N. C., about 100 miles, is due to the work of new interests in the enterprise, a syndicate of Pennsylvanians having taken it up, according to a letter from Raleigh to the MANUFACTURERS RECORD. The syndicate is represented by Messrs. Goff and Teonis of Philadelphia, who are asking for subscriptions totaling \$750,000 from different points along the proposed route. At Dunn, in Harnett county, it has been decided to vote September 1 on the issue of \$50,000 of bonds to aid the railroad, and it is said the loan will carry. The bonds are not to be delivered before the completion and regular operation of the line. It is said that it will be finished and in use by July 1, 1919. It will be of standard gauge.

The Central Carolina Railway idea was started three years ago by W. J. Edwards of Sanford, N. C., who was president of the company, and the route outlined was from Lillington via Buie's Creek, Benson, Mount Olive, Richlands, Jacksonville and other points to Swansboro. Some bonds were voted in 1914 for the enterprise by two townships in Duplin county. J. R. Baggett of Lillington, N. C., who was counsel for the road then, is understood to be still interested in it.

### Savannah & Atlanta Line's Future.

A report from Savannah says it is expected in railroad circles that the Savannah & Atlanta Railroad from Savannah to Camak, Ga., 145 miles, where it connects with the Georgia Railroad for Atlanta, will eventually be acquired by the Louisville & Nashville system. This has been suggested before, although there may now be more probability to the idea than heretofore. The Louisville & Nashville Railroad and the Atlantic Coast Line, which controls it through owning a majority of stock, are joint lessees of the Georgia Railroad, and it would be perhaps only another lease to obtain the sole use of the new line, which would afford them a very direct short route between Atlanta and the seacoast, probably more than ever desired by the Louisville & Nashville, especially since its subsidiary's renewal of the lease on the Western & Atlantic Railway between Atlanta and Chattanooga. Bonds for the Savannah & Atlanta Railroad, which is being financed through Wm. Morris Imbrie & Co. of New York, are about to be placed on the market, as recently announced. John H. Hunter of Savannah is president of the road.

### Gasoline Cars for New Interurban Road.

The Muscle Shoals Traction Co. has been incorporated by Solon L. Whitten of Chicago, Ill.; Tracy W. Pratt of Huntsville, Ala., and Thurston H. Allen of Florence, Ala., to build the projected interurban rail-

way from Florence to Huntsville, 64 miles, with a branch of 12 miles to Lexington, Ala. The route from Florence is via St. Floraine, Bailey Springs, Killen, Center Star, Rogersville and Athens. It goes on the north side of the Tennessee River, supplying a section of country now without railroad facilities. The line will be practically level, although there is some rough ground between Florence and Rogersville. Gasoline motor cars of the McKeen make will be used. The contract for engineering and construction has been let to the Central Construction Co. of Indianapolis, Ind., E. M. Wilkins, manager. Rails and other supplies have been purchased. The road will connect with the Louisville & Nashville Railroad and the Southern Railway at Florence, with the Louisville & Nashville at Athens and with the Southern and the Nashville, Chattanooga & St. Louis Railway at Huntsville. The officers are: President, Solon L. Whitten; vice-president and treasurer, Tracy W. Pratt; secretary and general manager, Thurston H. Allen; chief engineer, E. M. Wilkins; consulting engineer, M. S. Bingham.

### New Equipment, Etc.

Santa Fe system's large orders for equipment to be delivered this year and next will cost, it is announced, between \$15,000,000 and \$16,000,000. They include (some items having been previously reported separately) 1500 coal cars, 1000 stock cars, 800 refrigerator cars, 500 tank cars, 130 locomotives, 25 baggage cars and 10 passenger cars. The tremendous advances in the cost of railroad equipment in the last three or four years swells the aggregate value of these orders to unprecedented figures. Even since last year the average price of the engines has risen from \$33,000 to \$50,000. The price of cars has advanced about 100 per cent. in the last four years.

Norfolk & Western Railway is building 10 Mallet type locomotives in its own shops.

Pennsylvania Railroad has ordered the construction at its Altoona shops of a total of more than 2200 freight cars for next year's delivery. This includes 2000 box cars, 100 maintenance of way cars, 100 cabin cars and 25 well-hole cars. All of these cars are to be steel construction.

Virginia Railway & Power Co., Norfolk, Va., has ordered 20 steel construction street cars from the St. Louis Car Co.

Monongahela Valley Traction Co. has purchased a large electric locomotive to handle express traffic between Fairmont, Clarksburg, Weston and other points on its line.

### Railroads' War Saving in Effort and Material.

Fairfax Harrison, chairman of the Railroads' War Board, announces that the railroads of the United States, as a part of their efforts under the direction of the Railroads' War Board to make available a maximum of transportation energy for the movement of freight necessary for the successful conduct of the war, already report the elimination of passenger trains aggregating 16,267,028 miles of train service per year. This is done to save man power, fuel, and motive power, which can thus be applied to the transportation of necessities. This elimination of passenger service will make available for other purposes over 1,120,000 tons of coal. All the roads have not yet reported, so the economies achieved will probably total much higher than these figures.

Chairman Harrison also says that reports to the Federal Government just compiled show that in June the railroads hauled 750,323 carloads of bituminous coal, an increase of 26.2 per cent. over June of last year.

### The "Timber Belt Limited."

The Christie & Eastern Railroad, about 11 miles long from Christie to Pearson, La., a new lumber line just built by the Peavy-Wilson Lumber Co., has adopted a motor car constructed from the chassis of a light automobile with a truck body attachment and cross-seats for passengers, the car being newly equipped with flanged wheels so it can run on the track.

Concerning the construction of this novelty it is said that the railroad required some means of passenger



transportation, and as it would not be profitable to operate regular trains, the idea of building up an independent unit was hit upon. The new car is nicknamed the "Timber Belt Limited," according to a local report, and will be heartily appreciated by those who have to avail themselves of its accommodation.

### Construction Deferred.

President Frank A. Gannon of the Washington-Newport News Short Line, 55 Liberty street, New York, says with reference to the company's contemplated construction of bridges, especially the large bridge to be erected over the Potomac River at Metomkin Point, Va., that, owing to the unsettled conditions of finances, delivery of materials, etc., and the labor situation, "we have decided to rest on our oars until there is a clearing of the atmosphere."

The proposed line of railroad which the company is to build will extend from Washington to Newport News, Va., about 150 miles, going down through country now without railroad facilities and some distance to the east of the railroad from Washington to Richmond.

### Marshall & East Texas to Be Sold.

The Marshall & East Texas Railway is to be offered for sale September 4 by Henry B. Marsh, special commissioner, according to a report from Sherman, Tex., which says that the United States District Court has issued an order to that effect, fixing the upset price at \$675,000. The sale is to take place at Marshall, Tex., where the offices of the road are located. The line is 92 miles long from Winnsboro to Elysian Fields, Tex., via Gilmer, James, Marshall and other points. Bryan Snyder of Marshall is receiver.

### Extension in Operation.

The Shearwood Railroad, which was recently completed by the construction of a 12-mile extension from Nevils to Claxton, Ga., where it connects with the Seaboard Air Line, has put on a double daily passenger service. The road is now 27 miles long from Brooklet to Claxton. It connects with the Midland Railway at Leland and with the Savannah & Statesboro Railway at Brooklet. J. N. Shearouse of Brooklet is president.

### Annual Report Shows Excellent Gains.

The report of the Atlanta, Birmingham & Atlantic Railway Co. for the year 1916 shows operating revenue \$3,339,840, increase as compared with 1915, \$487,798; net operating revenue after deducting operating expenses \$784,659, increase \$337,663; operating income after taxes, etc., \$622,143, increase \$334,221; gross income \$725,323, increase \$383,118; net income \$286,899, increase \$259,384.

### One Phase of the South's Contribution to Shipbuilding.

Raleigh, N. C., July 20—[Special.]—At West Canton, N. C., there is an interesting plant which makes treenails, which are used in building wooden ships. Ship men pronounce the word as if it were spelled "trunnels." This plant is owned by J. W. L. Arthur, an Asheville man, and his product is known as "Mount Mitchell Yellow Locust Treenails." These big wooden nails are from 15 to 40 inches long, and the plant turns out 10,000 a day. The yellow locust timber is the same sort which is most valued in the manufacture of insulator pins, which are known to the trade as locust pins. This West Canton plant supplies treenails for the United States Shipping Board, and sells a great many in Canada, notably at Quebec. Many go to Maine, New York and San Francisco, and to Sollers, Md. To the latter place six carloads are now being shipped. Some places take as many as 10 carloads, one of these being Raymond, in the State of Washington. The yellow chestnut timber is getting scarce, and the demand for the treenails is now greater than in perhaps 75 years, for about the last of the yellow locust is in these North Carolina mountains. So pressing is the demand that Mr. Arthur tells the writer he is actually ordered to ship by express, something undreamed of a year ago.

FRED A. OLDS.

## Good Roads and Streets

### SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

#### Bonds Voted.

Berryville, Ark.—Carroll county voted \$75,000 bonds for road improvements.

Hamilton, Tex.—City voted \$20,000 bonds for improving streets.

Mt. Holly, N. C.—City will issue \$10,000 bonds for constructing sidewalks, curbs and gutters.

Milligan, Fla.—Okaloosa county voted \$50,000 bonds for road improvements.

Springfield, Tenn.—Robertson county voted \$150,000 bonds to improve roads.

#### Bonds to Be Voted.

Benton, Mo.—Scott county votes August 1 on \$750,000 bonds for constructing roads.

Carlisle, W. Va.—City will vote on issuing \$50,000 bonds for street paving.

Dallas, Tex.—Dallas county will vote in August on issuing \$1,000,000 bonds for constructing roads.

Key West, Fla.—Monroe county will vote in August on issuing \$100,000 bonds for road construction.

Leesburg, Fla.—City will vote on issuing \$20,000 bonds for paving streets.

New Madrid, Mo.—New Madrid county votes August 3 on \$850,000 bonds for road construction.

Pittsburg, Tex.—Camp county votes August 6 on bonds for \$35,000 to improve highways.

#### Contracts Awarded.

Logan, W. Va.—Logan county awarded contract for constructing 12-mile road, etc.

Lynchburg, Va.—City awarded \$13,000 contract for stone roadway construction.

Panama City, Fla.—Bay county has awarded contracts for road construction costing \$270,000, and bridge construction costing \$30,000.

Pine Bluff, Ark.—Jefferson county awarded a \$38,000 contract for building highways.

Pine Bluff, Ark.—Jefferson county awarded contract for constructing 18 miles of gravel highway.

Port Wentworth, Ga.—Port Wentworth Terminal Corporation awarded \$68,000 contract for street improvements.

Victoria, Tex.—City awarded \$104,000 contract for rock-asphalt paving.

Wartburg, Tenn.—Morgan county awarded \$20,000 contract for road surfacing.

#### Contracts to Be Awarded.

DeWitt, Ark.—Arkansas county will build 13-mile road to cost \$141,000.

Friars Point, Miss.—City receives bids until August 7 for 120,000 square feet of concrete sidewalks.

Mt. Ida, Ark.—Montgomery county will construct a 47-mile road costing \$26,000.

Savannah, Tenn.—Hardin county receives bids until August 16 for constructing a 40-mile gravel road.

Smithfield, N. C.—City will expend \$10,000 for sidewalk construction.

St. Augustine, Fla.—St. Johns county plans to construct 70 miles of highway to cost \$93,000.

Walnut Ridge, Ark.—Lawrence county will build 13-mile road costing \$80,000.

West Point, Ga.—City receives bids until August 7 for 32,000 square yards of street pavement, 10,500 yards of sheet cement sidewalks, etc.

### Lexington to Norton Highway Proposed.

Whitesburg, Ky., July 23—[Special.]—The Whitesburg Business Men's Club was organized here Friday with a strong membership to boost a model roadway

from Lexington, Ky., through the Eastern Kentucky coal fields by way of Hazard, Whitesburg, Jenkins and on to Norton, Va., in the center of the Southwestern Virginia coal fields, a distance of about 225 miles. L. Wilson Fields was elected president, and A. C. Adams, secretary. A number of speeches were made, including one by W. G. Coutts, Big Stone Gap, Va., who is fostering the movement of this important highway, and who is also making efforts to interest financiers in the development of Kentucky and Virginia coal fields. Mr. Coutts is an ardent advocate of the organization of commercial clubs, and he is very active in arousing public spirit of communities in progressive work.

In order to tap a rich and rapidly developing coal field along the headwaters of the Big Sandy River, it is proposed to construct a branch road from Jenkins, Letcher county, to Pikeville, 30 miles distant. Pike county, of which Pikeville is the county-seat, is active in good-roads construction, having a good system of county roads already under way. A model thoroughfare is being constructed from Pikeville to Prestonburg, Floyd county.

The organization of business men into live boards of trade will follow in Hazard, Perry county; Harlan, Harlan county, as well as throughout Eastern Kentucky. They will have for their objects the development of the coal fields in this section, the construction of a system of good roads and the general upbuilding and betterment of their communities.

### MILLIONS FOR GOOD ROADS IN MISSISSIPPI.

#### State and National Highways and Roads in All Directions Included in Program of Construction.

Jackson, Miss., July 21—[Special.]—With \$10,000,000 available for better highway construction in this State, work on good roads has not stopped because of the war, although it has been held back by the lack of cars to bring in materials.

Lands in South Mississippi have appreciated in many instances from \$10 an acre to \$25 an acre since the State has gone into good-roads construction. This year has been marked by tremendous progress in the Delta, where a large cotton crop last year left millions of dollars to be spent for automobiles and good roads to go with them.

Probably no other State in the South has as much money available for good-roads projects as Mississippi. Within the year highways will be completed connecting every important city. There is a good road from Memphis to New Orleans through the State, another from Jackson to Meridian, another from Natchez to Mobile, and the Jackson Highway, the Jefferson Highway and other national projects are either complete or building within the boundaries of the State.

Good-roads bond issues are almost as certain to carry as issues for consolidated schools. The rural sections are not asleep any longer to the value of highways, and they want them. The consequence will be that in another twelvemonth it will be possible for tourists to visit any section of the State in comfort, and farmers will be able to reach every nearby market center without difficulty. Marketing of all kinds of farm products in car lots, also the cream routes, have made good roads to farmhouses a necessity.

### \$1,000,000 for Florida Good Roads in 1918.

Jacksonville, Fla., July 23—[Special.]—According to F. O. Miller, member of the State Road Department from the State at large, the plans for the building of permanent highways in Florida embody the expenditure during 1918 of more than \$1,000,000, excluding the money to be spent by the various counties from bond issues and other sources. The road department will have under its control after January 1, 1918, 300 convicts, provided by the last Legislature, and the moneys for the road building will come from the following sources: One-half mill State tax, amounting to over \$150,000; all of automobile license tax fund, amounting to approximately \$300,000; Federal-aid moneys for 1918, amounting to \$212,000; Federal-aid moneys for 1916, of \$56,000, and of 1917, of \$168,000,

still intact, and approximately \$100,000 now in other channels that will be diverted to this fund.

The various counties of the State will and have already floated bond issues for the construction of better highways, and, working in conjunction with the State Road Department, will soon see the money spent where it will do the most good.

In speaking of the matter, Mr. Miller states that it is planned to spend \$45,000—\$35,000 from the automobile license taxes and \$10,000 Federal-aid money—on the National Highway, between Jacksonville and Lake City, as soon as possible, and that the two miles of bad road in Nassau county, on the Dixie Highway, will be fixed with \$3000 of money provided by that county and \$3000 Federal-aid money.

In Baker county there will be \$14,000 of Federal-aid money and \$75,000 of bond money to complete with sand-clay the 33 miles through that county. In Columbia county \$5000 from each the county and Federal-aid fund will be used to complete the road into Lake City, beyond which the road is now in excellent condition.

The department has planned and will carry out the idea of constructing a National Highway, hard surfaced, from Jacksonville to Pensacola, and from either Lake City or Live Oak down the middle of the State, with laterals connecting on either side. These roads will give the State the best road system in the South.

### Completion of Dixie Highway Urged for Military Purposes.

Chattanooga, Tenn., July 21—[Special.]—The importance of the early completion of divisions of the Dixie Highway for military service has been strongly emphasized in letters received from the Secretary of War and Major-General Wood, commanding the Southeastern Department, by Judge M. M. Allison, president of the Dixie Highway Association.

Secretary of War Baker urges that every effort be made to persuade the State and county authorities to complete through roads, stating that their importance at this time cannot be overestimated. "They can perform no more patriotic service than this," is his closing injunction.

General Wood is deeply interested in the improvement of the sections of the highway connecting the various cantonments and along the coast from Savannah to Jacksonville and between Charleston and Savannah.

"I am particularly interested in the effort you are making to build up what is known as the 'Dixie Highway.' In this connection I want to invite your attention to the advisability and desirability of completing a good road between Charleston and Savannah, both by way of Augusta and the direct line, and also the coastal links between Savannah and Brunswick and Brunswick and Jacksonville. There are some sections of good road via the latter route, but there are also some very, very difficult sections, especially on the direct route between Charleston and Savannah and between Brunswick and Jacksonville, as well as north of Brunswick.

"It is also very important that the roads connecting the various military cantonments should be put in good condition for service."

The improvement of practically all of the mileage of the Dixie Highway is highly important under the request of the Secretary of War that through roads be completed for use in the movement of troops and the transportation of food products and supplies. A large part of the mileage of the highway is covered by the urgent suggestion of General Wood that the roads connecting the various cantonments should be put in good condition for service. At the present time there are located along the Dixie Highway training camps at Fort Sheridan, Chicago, and Fort Benjamin Harrison, Indianapolis; a large mobilization camp for the draft army under construction at Louisville, Ky.; a large quartermaster's depot at Jeffersonville, Ind., across the river from Louisville; a large training camp and mobilization cantonments at Chattanooga and Atlanta; a large quartermaster's depot at Atlanta; a mobilization cantonment for National Guard at Macon, with still another large camp at Augusta, Ga. General Wood has emphasized the importance of the improvement of the link of the highway between Savannah and Jack-

sonville, as well as the construction of a connecting road along the coast from Charleston to Savannah.

With the possible exception of between Louisville and Chattanooga the distances between the camps, cantonments and quartermasters' depots along the Dixie Highway are such that it would be practical from the standpoint of saving in time, cost of transportation as well as in railroad cars to haul a large part of the supplies used by the various camps by motor truck if the highway was placed in such condition as to be rated available for military use. This is demonstrated in the case of the camp at Chattanooga and the quartermaster's depot for the Southeast, located at Atlanta, a distance of 124 miles. When the cost of handling from warehouse to truck and from truck to train, repeating the handling on delivery, as well as the delay incident to waiting on the schedule of freight or express is considered, the saving which a good road between these points can easily be seen. This does not take into consideration the value of such a highway for the establishment of personal communication between the commanding officers of the two camps, or its use in combined maneuvers.

When the importance of the highway between Chattanooga and Atlanta was presented to the Board of Commissioners of Bartow county, Georgia, at their recent meeting by officials of the Dixie Highway Association the board immediately passed a resolution placing their entire road forces and equipment at the disposal of the military authorities of the two camps to construct or rebuild any road through the county which might be suggested. Residents along other roads through the county demonstrated their patriotism by stating that they would forego any road work in their own community for the present in order that the county commissioners might proceed with the construction of the road necessary to the needs of the Government. Now the workhouse forces have accordingly been set to work cutting down a bad grade and eliminating a dangerous curve along the highway in the north end of this county. Other counties along the highway, particularly in Georgia, have shown a similar desire to co-operate with the Dixie Highway Association and the military authorities in the construction of much-needed roads.

### Arkansas Roads to Cost \$341,214.

Four Arkansas counties have plans and specifications for highway construction which will cost about \$341,214. These improvements include: Thirteen miles of highway, costing \$93,000, in DeWitt county; 13 miles, costing \$141,582, in Lonoke county; 47 miles, costing \$26,357, in Montgomery county; 13 miles, costing \$80,268, in Lawrence county.

### Street Improvement Bonds for \$132,000.

Bonds to the amount of \$132,000 have been voted for street improvements at Edgewood, W. Va., near Wheeling. C. M. Criswell is the city's mayor, and anticipates soon determining details for the contemplated work.

### Street Paving to Cost \$104,500.

Contract has been awarded at \$104,521.25 for the street paving for which the city of Victoria, Tex., recently invited bids. This construction calls for 40,000 square yards of paving with Uvalde rock asphalt. It was obtained by the Uvalde Rock Asphalt Co. of Beaumont and San Antonio, Tex.

### New \$550,000 West Virginia Company.

West Virginia coal land development is planned by the Buffalo-Thacker Coal Co., Huntington, W. Va., which has been incorporated by L. R. Reese, T. T. Bousman, G. M. Simms and others. The capitalization is \$550,000.

The Highland City Cotton Mills and the Chinnabee Cotton Mills, both of Talladega, Ala., are reported to build additions.

## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

### Textile Education in North Carolina.

The textile department of the State College of Agriculture and Engineering, at Raleigh, has been awarded the students' medal by the National Association of Cotton Manufacturers. This is a high honor, as it is awarded only to textile schools which have complete equipment for instruction in the manufacture of cotton, including designing; the course must be of the recognized standard and there must be at least 50 students and four competitors for the medal. There were in this textile school or department 80 students for the full term and 22 for the special short course of six weeks. A number of North Carolina textile mills sent young men to take the latter course, paying all their expenses.

The United States Government has for a number of years made tests of cotton in this college, and has again begun these tests, the work thus in progress being under direction of W. S. Dean, a graduate of this institution. He is aided by three other Government experts. The staff of the textile department is composed of Thomas Nelson, John E. Holsted, Herbert N. Steed and Henry K. Dick.

### Wearwell Bedspread Mill.

Manufacturing will soon begin in the Wearwell Mill at Leaksville, N. C., of the Carolina Cotton & Woolen Mills Co. of Spray, N. C. The building has been completed, and it is a one-story brick structure 390 feet long by 290 feet wide, with concrete floors. Its equipment of machinery, now being installed, will include 10,000 spindles, with carding equipment to match, and 176 jacquard looms for weaving bedspreads. This plant will employ about 300 operatives.

### Textile Notes.

The Asheboro (N. C.) Hosiery Mill will add 30 knitting machines, and has ordered this new equipment.

Walter L. Cates, C. H. Cates and John B. Cheek have incorporated the Cates Hosiery Co., Burlington, N. C., with a capital of \$50,000.

The J. E. Latham Company, Greensboro, N. C., will install a knitting mill, beginning with a capitalization of \$100,000. Machinery for bleaching, dyeing and finishing is wanted.

Manufacturers of silk will establish a silk-spinning mill at Parkersburg, W. Va., installing an equipment of machinery costing \$100,000. The Board of Commerce has arranged for this enterprise, and, in order to secure its location, will provide a two-story 300x50-foot brick building with water supply and heating system, costing \$50,000.

Artificial fabrics will be the product of the Charleston (S. C.) Mills Co., mentioned last week as incorporated with \$75,000 capital. J. H. Weil is president and C. C. Groat is vice-president. A building with 12,000 feet of floor space has been secured, and an equipment will be installed at a cost of \$90,000, this machinery having been purchased.

An increase of capital from \$100,000 to \$400,000 has been announced by the Standard Processing Co., Chattanooga, Tenn.

This increase of capital provides the funds for additions heretofore announced. The improvements include two-story 112x84-foot mill addition; one-story 100x50-foot mill addition; cost of these two, \$25,000; install new warp mercerizing machine, quilling and winding equipment for increasing capacity; cost, \$40,000.

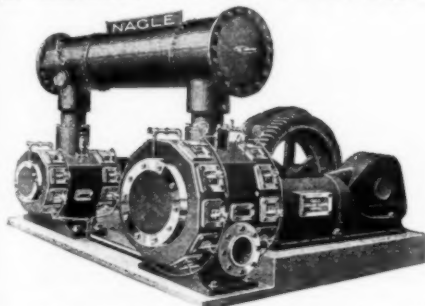


## MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

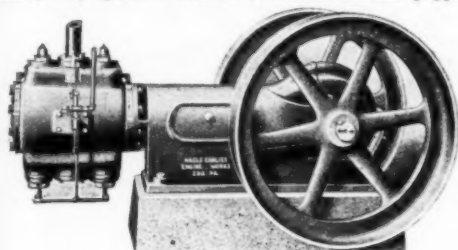
### Modern Air Compressors.

During the last five years a great many necessary improvements have been made in air-compressing machinery. The old type slow-speed compressors, with heavy non-cushioned valves, large clearances and insufficient valve area, have been superseded by the modern high-speed compressors, with either cushioned poppet or



CLASS B AND E STEAM-DRIVEN COMPRESSOR.

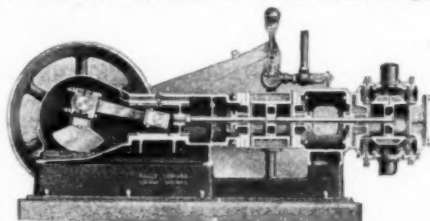
plate valves, minimum clearances and liberal valve area. The Nagle Corliss Engine Works of Erie, Pa., throughout this period has kept well up to the front with added improvements to their complete line of air compressors, which are built to suit all requirements from 3 cubic feet up to and including 8000 cubic feet of free air per minute, and embody up-to-date practice in every detail, viz., splash lubrication, silent cushioned poppet



CLASS A BELT-DRIVEN COMPRESSOR.

or plate valve, allowing high speeds; ample valve area and minimum clearances, with attendant high volumetric efficiency; large air passages and connections; increased water jacketing of cylinder barrel and heads, with provisions for thorough cleaning.

The materials entering into the construction of these air compressors are of the very best. Each part is made of material found to be best suited for its parti-



CLASS Y-C-E MOTOR-DRIVEN COMPRESSOR.

cular service after severe tests by the company's engineers and chemists. All parts undergo rigid inspection from time to time as they are produced in the shop, all defective material being scrapped. By means of an elaborate system of jigs, gauges, fixtures, etc., all parts are fabricated with the end in view of being strictly interchangeable.

One of the latest additions to this already extensive line is the class YCE Direct-Mounted Motor-Driven Compressor, which is essentially a high-speed machine, and as the speed of a normal motor does not exceed that of the compressor, the first cost of the direct-coupled plant is but little higher. By direct drive, gearing and belts, with their attendant upkeep and limited life, are eliminated. The floor space is also materially decreased.

The larger steam-driven compressors are furnished with either duplex or compound steam cylinders, con-

densing or non-condensing, to suit steam conditions. A complete line of either four-valve or releasing Corliss steam cylinders as used on the standard line of high-grade Corliss engines enables the Nagle Works to furnish an excellent steam end.

Commercial efficiency is the result. The machine, which at a given first cost, including cost of installation on the foundation, actually delivers a specified amount of air with the minimum amount of power and at a minimum cost for upkeep and attendance, has the highest commercial efficiency. The above is what the manufacturers have in view constantly, and which has been realized in every instance where the compressors have been properly installed and attended. The company has offices in all principal cities.

### The Scott Gasoline Rock Drill.

L. L. Scott, an engineer located at 1104 Bank of Commerce Bldg., St. Louis, Mo., has been developing a gasoline rock drill for the past nine years. It is a complete self-contained rock-drilling plant, mounted on a tripod, and eliminates the use of a power plant and pipe lines. Although drills of this make have been operated in the St. Louis quarries for the past five years, Mr. Scott has not felt fully satisfied to put them on the market, but now arrangements are being made to market them in a substantial way.

A Scott drill operating at the quarry of the Glencoe Lime & Cement Co., St. Louis, has drilled 68 feet in a nine-hour day, using two gallons of gasoline and one-quarter pint of cylinder oil. The rock was hard limestone.

The size of machine developed will drill holes up to 12 feet in depth. It weighs 200 pounds without the mounting, and all parts are enclosed and protected. Gasoline is supplied from a small steel pressure tank. A pressure of two pounds is pumped up by hand twice per day; about one minute required for pumping up pressure. The Atwater-Kent Unisparker ignition is used and is entirely enclosed. All oiling is automatic. Half a pint of oil mixed with five gallons of gasoline oils every part of the machine.

The drill operates on the "hammer" principle. A hollow hexagon drill steel is used (no special shank is required), and the water for cooling the engine is run through the hollow steel to the bottom of the drill hole. About 800 blows per minute are struck. The engine is a simple single-cylinder two-cycle, and is free from valves, gears and cams. The hammer is moved directly by explosive pressure and strikes a "free piston" blow. There are two pistons, one contained within the other. The outside piston is the hammer and has no mechanical connection with the inside piston, which latter is connected to the crank shaft through connecting rods. An explosion takes place with every down stroke, driving the two pistons downward. The hammer piston strikes its blow on a tappet (which contacts with the end of the drill steel) at about 60 degrees before the crank shaft has reached its lower dead center. The inside piston moves on (independent of the hammer piston) with the crank shaft. Said inner piston uncovers air ports in the hammer piston (on its independent downward movement) and on the back stroke (caused by the momentum of the flywheels) the hammer is picked up on a cushion of air. When the hammer strikes its blow it is free and disconnected from all parts. It will be seen by this arrangement that no shock to the crank shaft or bearings is possible. Ball and roller bearings are used on the crank shaft and rotation shaft.

The drill steel is rotated step by step by a special "compound" gear, no ratchets, etc., being used to get intermittent rotation. A standard double thread worm is cut half in two, and adjacent threads are connected by a straight no pitch thread. The worm wheel is standard, with the exception that one side of each tooth is cut straight. The compound worm (which operates the worm wheel) is driven by means of a chain and sprockets from the crank shaft. The worm wheel, which is attached to the chuck (said chuck carries the end of the drill steel), rotates during one-half revolution of the worm and is stationary during one-half revolution. The rotation of the drill steel takes place only on the up stroke of the hammer.

The vanadium steel is used on all important parts. Special attention is given to the heat treatment of this steel.

### 4,000,000 TONS OF COAL ANNUALLY.

#### Big West Virginia Enterprise Progressing With 3300-Acre Development.

An annual output of 4,000,000 tons of coal is being arranged for by the Simpson Creek Coal Co., Baltimore, whose organization with \$3,000,000 capital and development plans were announced last year. Extensive improvements are progressing on the company's 3300 acres of land, carrying the Pittsburgh vein of gas coal on Simpson Creek, in Taylor and Barbour counties, near Galloway, W. Va. Galloway mine No. 1, at Simpson, on the Baltimore & Ohio Railroad, has been operating since January with a capacity of 250,000 tons annually, this plant being electrically equipped throughout and generating its own electricity. Mine No. 2 and Mine No. 3 installations are progressing, and their output will be approximately 750,000 tons.

The plant facilities in course of construction include two steel tipples of the retarding conveyor type, built of concrete and steel and strictly fireproof, for operation by electricity. Each tipple will have an hourly capacity of 500 tons, and is being arranged to load run-of-mine coal or to screen it into  $\frac{3}{4}$  or 1 in. and  $\frac{1}{2}$  in. lump with resultant slack coal. Box-car loaders are being installed for each tipple. The three-entry panel system has been adopted for the inside development, including entry and empty entry and air course to provide maximum output. Ten-ton motors for hauling will be installed, and 42-pound steel rails will be laid. Chain-cutting machines have been ordered, and the electric power will be furnished by the Monongahela Valley Traction Co. of Fairmont, W. Va., which is building a transmission system from its central power plant. The Baltimore & Ohio Railroad is progressing with the construction of a branch railway to the mines from its main line at Flemington, W. Va. When the mines are fully developed there will be required 175 steel railroad hoppers and two locomotives daily on this branch.

The Simpson Creek Coal Co. has planned modern and complete facilities for its mining town. It is building a model municipality, with sewer system, water supply, improved streets and sidewalks, cottages and bungalows of varying type, schoolhouse, ball park, store and office building constructed of reinforced concrete, etc.

### A Letter from Alexandria, Egypt.

ZERBINI & ANGELETTOS, No. 64 Midan Street, Alexandria, Egypt.

We are glad you have forwarded the MANUFACTURERS RECORD. Those American products which interest us are chemicals and alimentary products, in which we would like to act as agents for substantial houses. We have a special branch for oils, petroleum, cottonseed oil and olive oil. In mineral oil we would like to be agents for an American house. Each day we dispose of 10 to 12 barrels to customers in Egypt in general through agents at Fautah, Cairo, Masourah, Minia and Har-town in the Loundon. Oil made from cottonseed is one of our leading regular articles, and our regular consumption is more than 50 barrels a day. During the month just past, an exception, we sold 3000 barrels, representing 30,000 pounds sterling. Cottonseed oils of American origin are already being imported into Egypt, and on account of their good quality need only a firm having the right customers to represent and push them with a little energy to bring results. At Mytilene, Greece, we have an olive-oil factory which ships large quantities to Egypt and Europe. Our refinery is by no means perfect in system, and we would like to communicate with some of your manufacturers of machinery with a view to improving it.

### Machinery Needed for Australian Plants.

IRWIN-HARRISON & CROSFIELD, INC., 90 Wall Street, New York.

We are especially interested in milling, slotting, planing, drilling, boring and brass finishers' machines; shapers, crucibles, ball-bearings. In addition to these lines of interest to the machinery department of our Australian company we have a letter from our Calcutta house, requesting an agency of a reliable cement manufacturer.

# Construction Department

## IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

### DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

### AIRPLANE PLANTS, STATIONS, ETC.

Fla., Pensacola.—Navy Dept., Washington, D. C., let contract H. Monk of Pensacola at about \$75,000 to double size of steel aeroplane hangars D and C now under construction by Mr. Monk.

### BRIDGES, CULVERTS, VIADUCTS

Ark., Parkin.—Comms. Cross County Road Improvement Dist. No. 1, Wynne, Ark., let contract Larimer-Burgett Bridge Co., Memphis, Tenn., to construct steel bridge across St. Francis River, near Parkin on route on Wynne-to-Memphis highway.

Fla., Delray.—Palm Beach County Commissioners, West Palm Beach, will construct steel bridge near Delray; Scherzer lift pattern; cost \$9000; County Engr. will prepare plans and specifications.

Fla., Pensacola.—Escambia County Commissioners will construct 4 concrete bridges on Bayou Chico, Bayou Texar, Pine Barren Creek and Eleven-Mile Creek.

Fla., St. Augustine.—St. Johns County Comms. will order election to vote on bonds to construct reinforced concrete bridge ½ mi. long across Matanzas River and 70 mi. of roads; bridge will connect St. Augustine and Anastasia Island with another bridge; C. E. Henderson, Ch. Engr. of County, will supervise construction.

Ga., Savannah.—Savannah-Altamaha Bridge Co., capital \$100,000, inceptd. by Mills B. Lane, Frank C. Battey, Arthur W. Solomon and others; will construct bridge across Altamaha River. (Mr. Lane lately noted as promoting organization of company to build Altamaha River bridge.)

N. C., Asheville.—Buncombe County Commissioners, Asheville, and City Comms. of Asheville are considering construction of bridge across French Broad River; length 100 ft.; total width 30 ft.; concrete; arches and girders; cost \$105,000 to \$110,000.

Okla., Buffalo.—Harper County, Good Township, is reported to have voted \$13,800 bonds to construct bridges. (Address County Comms.)

Tenn., Clarksville.—Montgomery Comms. voted to issue \$50,000 bonds to construct roads.

### CANNING AND PACKING PLANTS

Ala., Gadsden.—John S. Paden, Otto Agricola, S. H. Silbert and others appointed committee to promote erection of packing plant.

Fla., Palmetto.—M. O. Harrison will build Packing-house; 120x75 ft.; wood construction with paper roof; electric lighting; install \$4000 mechanical equipment; Stoltz & McIntosh, Contrs.; Fred Kermod, Archt.; both of Palmetto.

Tenn., Memphis.—Southern Home Canning Co., capital \$10,000, inceptd. by G. A. Canale, J. D. Canale, A. P. Canale and others.

Tenn., Union City.—Reynolds Packing Co., capital \$25,000, inceptd. by W. G. Reynolds, T. E. Meadow, Z. W. Corum and others.

Tex., Galveston.—Rosenthal Packing Co., capital \$5000, inceptd. by Louis Rosenthal, A. F. Bell and Gustav Jud.

### CLAYWORKING PLANTS

N. C., Walnut Cove.—M. A. Walker & Co. will rebuild burned boiler and engine-house at brick plant.

### COAL MINES AND COKE OVENS

Ala., Cullman.—Stouts Mountain Mining Co., capital \$30,000, inceptd. by J. Earle Collier, T. J. Christman, A. C. Webb and others.

Ala., Lynn.—Lynn Coal Mining Co., capital \$3000, inceptd. by J. L. Clark, D. K. Carter and H. W. Crawford.

Ala., Springville.—Springville Coal Co., capital \$3000, inceptd. by J. L. Forman, Prest.; W. M. Forman, Secy.-Treas.; both of Springville; Jas. L. Herring, V.-P., Gadsden.

Ark., Clarksville.—Lucas-Mardie Coal Co. organized; M. A. Lucas, Prest.; and E. J. Mardie, Mgr.; develop 600 acres; estimated capacity 500 tons daily; machinery mainly supplied. (Lately noted inceptd., capital \$10,000.)

Ky., Mayking.—Mayking Coal Co. (lately noted) organized; J. O. Borner, Prest.; D. D. Shaw, V.-P.; R. M. Chambliss, Secy.; B. A. Bass, Gen. Mgr.; develop 1100 acres land; daily output 10 to 12 cars coal. (See Machinery Wanted—Rails; Cars; Hoisting Drum; Wire Rope.)

Ky., Sergeant.—Whitley-Elkhorn Coal Co. (lately noted leasing land) organized; B. F. Rose, Prest.; J. M. Mahan, V.-P.; E. F. White, Secy.-Treas.; J. M. Freeman, Mgr.; develop 350 acres land; daily output 400 tons coal; install electric generator, electric coal-cutting machinery, etc. (See Machinery Wanted—Mining Machinery; Generator.)

Ky., Middlesboro.—Reese Coal Co. organized; John Reese, Prest.; Mossy Reese, Treas.; develop 100 acres land; daily output 5 carloads coal; contemplates increase. (Lately noted inceptd.)

Ky., Whitesburg.—Holt L. Hutchins, Clay City, Ky., will develop 300 acres land; initial daily capacity 600 tons coal.

Mo., Kansas City.—Southern Coal Co., capital \$5000, inceptd. by W. C. Perry, E. B. Caldwell and J. H. McCune.

Mo., St. Louis.—Union Colliery Co. organized; office at 400 Union Electric Bldg.; has 3000 acres coal land with mines equipped for daily production 4500 tons coal; properties in Illinois. (Lately noted inceptd. with \$100,000 capital.)

Okla., Tulsa.—Cosden & Co. purchased coal lands and will develop to supply their refineries and other plants.

Tenn., Knoxville.—Red Ash Coal Sales Co., capital \$10,000, inceptd. by M. J. Sullivan, H. B. Lindsay, W. J. Donelson and others.

Va., Clintwood.—Clintwood Coal Corp., capital \$25,000, chartered; W. W. Pressley, Prest.; N. B. French, Secy.

W. Va., Avondale.—Garland Pocahontas Coal Co., capital \$50,000, inceptd. by J. W. Baldwin and Janet K. Baldwin of Northfork, W. Va.; W. A. Thorngill of Bluefield, W. Va., and others.

W. Va., Beckley.—A. H. McIntire, Asst. Treas. New River Coal Co., MacDonald, W. Va., purchased City Coal Co.'s properties; also owns 100 acres adjoining; will develop.

W. Va., Beckley.—Cook-Carter Coal Co. plans erection of second plant for further development of Stonewall Coal & Coke Co.'s property (lately acquired) and adjoining acreage.

W. Va., Big Sandy.—Hampton Roads Collieries Co. organized; advises Manufacturers Record; Thos. W. Shelton, Prest.; Oscar B. Ferebee, V.-P. and Secy.; Alfred Anderson, Treas.; W. H. Soper, Mgr.; offices at 915 National Bank of Commerce Bldg., Norfolk, Va.; develop 630 acres coal land. (Lately noted, under Norfolk, Va., inceptd. with \$100,000 capital.)

W. Va., Clarksburg.—Shady Brook Coal Co., capital \$10,000, inceptd. by John B. Post and Harry Sheets of Clarksburg, F. P. Martin of Adamston, W. Va., and others.

W. Va., Clarksburg.—Philippi Gas Coal Co., capital \$25,000, inceptd. by Fenner Hart of Clarksburg, Walter S. Stewart of Adamston, W. Va.; J. W. Reeves of Elkins, W. Va., and others.

W. Va., Clay.—Jack Bend Coal Co., capital \$10,000, inceptd. by E. R. Reed, J. P. Dawson, B. C. Eakle and others.

W. Va., Breeding.—Hickory Branch Coal Co., capital \$15,000, inceptd. by J. Mat Smith, Jas. A. Goble and W. F. Hutchinson, all of Williamson, W. Va., and others.

W. Va., Elk Garden.—Elk Garden Big Vein Co., capital \$50,000, inceptd. by Stephen A. Dixon of Elk Garden, Howard Edgar Cross of Emoryville, W. Va.; Howard Dixon of Westernport, Md., and others.

W. Va., Fairmont.—New Superior Coal & Coke Co., capital \$50,000, inceptd. by A. S. Lehman, David M. Dean, Brooks S. Hutchinson and others.

W. Va., Harrison County.—J. M. MacDonald Coal Mining Co., capital \$300,000, inceptd. by J. M. MacDonald of Cincinnati, O.; D. J. Carter, Harry W. Sheets and others of Clarksburg, W. Va.

W. Va., Huntington.—Buffalo-Thacker Coal Co., capital \$550,000, inceptd. by L. R. Reese, T. T. Bousman, G. M. Simms and others.

W. Va., Lester.—T. R. Ragland of Beckley, W. Va., and others are reported to have purchased 50 acres coal land and will develop.

W. Va., Logan.—Brush Creek Coal Co., capital \$250,000, inceptd. by Naaman Jackson, H. C. Jones, Edward H. Butts and others.

W. Va., Oak Hill.—Meadow Fork Fuel Co., capital \$100,000, inceptd. by J. E. and J. S.

Lewis of Oak Hill, J. E. Gray of Glen Jean, W. Va., and others.

W. Va., Philippi.—Fisher Coal Co. inceptd. by E. W. S. Kennedy, J. Stanley Corder, W. Bruce Talbott and others.

W. Va., Radner.—Mozena Coal Co. organized; W. T. Hardwick, V.-P., Genoa, W. Va.; J. T. Lambert, Secy.; R. C. Taylor, Treas.; both of Wayne, W. Va.; Geo. Clay, Mgr., Radner; develop 250 acres land; daily output 100 to 300 tons coal; Basil S. Burgen, Constr. Engr., Huntington, W. Va. (Lately noted inceptd., under Wayne, W. Va., with \$25,000 capital.)

W. Va., Morgantown.—Davidson-Connellsville Coal & Coke Co., capital \$100,000, inceptd. by Chas. Davidson, Wm. C. Reynolds, Wm. J. Davidson and others.

W. Va., Morgantown.—Serepi Coal Co., capital \$50,000, inceptd. by J. M. Wood, Ben Green, E. T. Schultz and others.

W. Va., Sterling.—Sterling Colliery Co., capital \$200,000, inceptd. by W. E. De-gans, L. N. Frantz, E. J. Kelly and others, all of Huntington, W. Va.

W. Va., Weston.—Rineland Coal Co., capital \$50,000, inceptd. by Lloyd Rineland and J. H. Edwards of Weston, H. C. Skidmore of Sutton, W. Va., and others.

W. Va., Worthington.—Carolina Belle Coal Co., Goff Bldg., Clarksburg, W. Va., organized; Geo. S. Eager, Prest.; A. D. Ireland, V.-P.; Lee R. Rogers, Secy.; F. E. Young, Mgr.; develop 75 acres; daily capacity 5 cars; 5 beehive coke ovens. Lately noted inceptd., capital \$25,000. (See Machinery Wanted—Rails; Ovens; Building Material.)

### COTTON COMPRESSES AND GINS

Ark., Holly Springs.—Asa Hogg will erect cotton gin.

S. C., Gable.—Gable Globe Ginning Co., capital \$4000, inceptd. by W. J. Millsap and Leon B. McFaddin.

S. C., Spartanburg.—J. B. Caldwell of Campobello, S. C., will build gin. (See Cottonseed Oil Mills.)

Tex., Farmersville.—Farmersville Independent Gin Co. organized; C. M. Whitte, Prest.-Mgr.; A. N. Henslee, V.-P.; M. W. Stewart, Secy.; purchased gin equipment for 12-hr. capacity 50 bales cotton; plant complete cost \$12,000. (Lately noted inceptd.)

Tex., Smithville.—Smithville Gin Co., capital \$20,000, inceptd. by J. H. E. Powell, H. W. Cook, E. H. Eggleston and Emil Buescher.

### COTTONSEED-OIL MILLS

S. C., Spartanburg.—J. B. Caldwell of Campobello, S. C., will build 6-ton cottonseed oil mill and gin; electric power; purchased machinery and equipment.

Tex., Chillicothe.—Chillicothe Cotton Oil Co., capital \$125,000, inceptd. by C. E. Carlock, L. W. Campbell, Jr., and Richard T. Harris.

### DRAINAGE SYSTEMS

Fla., Fort Lauderdale.—Napoleon B. Broward Drainage District, W. C. Kyle, Chrmn. Comms., engaged Isham Randolph & Co., Jacksonville, Fla., and Chicago, as Chief Engrs.; drain and reclaim 550,000 acres Everglades land in Broward and Dade counties; near Fort Lauderdale and Miami; estimated cost drainage system, upwards of \$6,000,000; Wm. A. O'Brien, Project Engr. (Lately noted organized and to engage engineer, etc.)

Ky., Louisville.—Jefferson County Comms. let contract T. B. Miller & Sons Co., Louisville, at \$30,430 to improve Big Ditch from north to south fork of Pond Creek; drain territory surrounding Camp Taylor into ditch.

Miss., Ruleville.—Sunflower County, Dist. No. 5, will construct 25 mi. graveled road; Road Comms. receive bids until August 17; H. S. Stansel, Engr., Ruleville; John W. Johnson, Chancery Clerk. (See Machinery Wanted—Road Construction.)

Tenn., Huntington.—Carroll County Drainage Dist. No. 1 let contract Canal Construction Co. of Memphis, Tenn., to construct drainage system; 1,200,000 cu. yds. open-ditch work; 15 ditches, including laterals, length of canals will be 48 mi.; bottom width 6 to 4½ ft.; drain Beaver, Crooked Briar, Gwins and Clear Creeks and Middle Fork of Obion



River; reclaim 12,500 acres for farming; F. T. Tobey, Engr. (Lately noted inviting bids.)

### ELECTRIC PLANTS

Fla., Leesburg.—City will vote on \$40,000 light and water bonds. Address The Mayor.

Md., Baltimore.—Goucher College, St. Paul and 23d Sts., has plans by Ellicott & Emmart, 1102 Union Trust Bldg., Baltimore, for power-house on Oak St. between 23d and 24th Sts.; structure will be 1 story; 40x61 ft.; brick and concrete.

Mo., Canton.—City voted \$10,000 bonds to improve electric-light and water systems. Address The Mayor.

Okla., Henryetta.—Henryetta Public Service Co., capital \$200,000, inctpd. by J. R. Watson, A. W. Anderson and Harlan Reed, all of Okmulgee, Okla.

Okla., Supply.—City defeated \$6000 bonds to build electric-light plant. (Lately noted to vote.)

Okla., Stillwater.—City will vote on \$8000 bonds to purchase boiler for municipal electric-light plant. Address The Mayor.

Okla., Wynoka.—City will vote on \$26,000 bonds to construct electric-light and power plant; purchase engines. Address The Mayor.

Tex., Alvin.—Alvin Light & Ice Co., capital \$15,000, inctpd. by C. A. Levens, C. W. Martin and W. M. Galey.

Tex., Claude.—A. V. Wilson and O. F. Smalley (owners of local electric-light plant) will install additional machinery to secure 24-hour service; also build ice factory.

W. Va., Ronceverte.—Greenbrier Power Co., capital \$5000, inctpd. by J. W. Johnson of Alderson, W. Va., W. G. Mathews and A. C. Ford of Clifton Forge, Va., and others.

W. Va., Marlinton.—City votes July 30 on municipal ownership of local electric-light plant and water-works. Address The Mayor.

### FERTILIZER FACTORIES

Ark., Fordyce.—Lime Products Co. increased capital from \$15,000 to \$50,000.

S. C., Charleston.—Dawhoo Fertilizer Co., capital \$35,000, inctpd. by Walter Pringle and Chas. S. Dwight.

### FLOUR, FEED AND MEAL MILLS

Ark., Urbanette.—Basore Bros. Milling Co., capital \$10,000, inctpd.; H. H. Basore, Pres.; G. W. Basore, V.-P.; A. D. Basore, Secy.-Treas.

Ark., Little Rock.—Geo. Niemeyer Grain Co., Geo. Niemeyer, Pres., and Guy F. Williams, Mgr., will erect grain elevator and feedmill building; install mixed feed and corn chop machinery. (See Miscellaneous Enterprises.)

Ga., Dublin.—W. R. Lanier will build grist and velvet bean mill; also contemplates installing peanut crusher.

Ga., Thomaston.—Weaver-Birdsong Milling Co. advises Manufacturers Record: Have 50x60-ft. frame mill-construction building; install \$5000 feed mill, including mixing, grinding, sacking, shucking and shelling machinery; daily capacity 20 tons feed; purchased all equipment. (H. H. Birdsong and T. A. D. Weaver lately noted to install mill.)

Mo., St. Joseph.—Schrelber Milling & Grain Co., capital \$100,000, inctpd. by I. S. G. T. and A. B. Schrelber.

Okla., Newkirk.—Producers & Consumers Milling Co. (LeRoy Drak of Ponca City, Okla., and others) will build flour mill; main bldg. 5 stories; 8 concrete storage bins, each with capacity of 30,250 bu.; fireproof construction; daily capacity 750 bbls.; estimated cost \$250,000. (Lately noted inctpd. with \$250,000 capital.)

### FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Machinery. — Chas. J. Geohagan Machinery Co., capital \$25,000, inctpd.; Chas. J. Geohagan, Pres.; M. H. Geohagan, V.-P.; Grace Geohagan, Secy.

D. C., Washington.—Foundry.—District Commrs., Room 509 District Bldg., will erect foundry addition to McKinley Manual Training School No. 130, 7th St. and Rhode Island Ave.; bids until July 31; proposal forms, specifications and information obtainable from Chief Clerk, Engr. Dept., Room 427 District Bldg., Washington; \$5 deposit.

Md., Towson.—Drills, Compressors, etc.—Black & Decker Mfg. Co., 109 S. Calvert St., let contract Cowan Building Co., 106 W.

Madison St., Baltimore, to erect plant 60x200 ft., to manufacture electric air compressors, electric air drills, etc.; also erect extension 20x50 ft.; Herman F. Doeleman, Consult. Engr., 1101 American Bldg., Baltimore. (Lately noted as having 42 acres for plant and residential development.)

Mo., Kansas City.—Railway Switch.—Walls Frogless Switch & Mfg. Co., 1112 Waldheim Bldg., Eleventh and Main Sts., leased building at 23d St. and Broadway and will equip to manufacture frogless switch; has 2-acre site in Rosedale, Kan., but will not build at present. (Previously reported organized, etc.)

Mo., St. Louis.—Power-house Supplies.—Girtanner Mfg. & Sales Co., capital \$10,000, inctpd. by Fred Girtanner, Hermann Mueller and L. L. Kraft.

S. C., Allendale.—Boll Weevil Implements.—Carolina Boll Weevil Implement Co., capital \$15,000, inctpd. by J. J. Owens, R. F. Otts, R. P. Searson and others.

Tex., Humble.—Iron Works.—Humble Iron Works changed name to Cameron-Davant Co. and increased capital from \$10,000 to \$30,000.

Tex., Wichita Falls.—Tanks and Boilers.—John Tancered of Fort Worth, Tex., contemplates establishing plant to manufacture tanks and boilers; erect steel or brick building; install equipment, including high-power rollers for sheets, power punch, power beveling shear, acetylene welding plant, small machine shop, etc.; cost \$10,000.

### GAS AND OIL ENTERPRISES

Ark., Marianna.—Harris & Weld Oil Co., capital \$25,000, inctpd.; J. B. Harris, Pres.; W. I. Newbern, V.-P.; W. P. Weld, Secy.-Treas.

Okla., Le Flore.—Long Creek Oil & Gas Co., capital \$100,000, inctpd. by J. M. McElyen and Robt. E. Lee of Le Flore, and J. I. Levikow of Kansas City, Mo.

Okla., Oilton.—Hursey Petroleum Co., capital \$50,000, inctpd. by E. L. Hursey and others.

Okla., Oklahoma City.—Hedges Oil & Gas Co., capital \$25,000, inctpd. by W. C. Brisse, J. T. Hedges and G. E. Blackwelder.

Okla., Oklahoma City.—Columbia Oil Co. inctpd. with \$250,000 capital by W. H. Kirkbridge of Philadelphia, Pa.; R. Bruce Hamilton of Baltimore, Md., and others.

Okla., Oklahoma City.—Kitty-Lee-Marie Oil Co., capital \$50,000, inctpd. by Kathleen Garrison of Oklahoma City, Van Lee Hood of Los Angeles, Cal., and Marie P. O'Brien of Des Moines, Iowa.

Okla., Oklahoma City.—Santuna Oil Co., capital \$200,000, inctpd. by J. R. Cottingham, A. P. Corekett and S. W. Hayes.

Okla., Oklahoma City.—Loco Oil & Gas Co., capital \$100,000, inctpd. by J. S. Russell of Oklahoma City, J. M. Robinson of Loco, Okla., and J. T. Chelf of Comanche, Okla.

Okla., Oklahoma City.—Oil Refinery.—Southern Oil Corp., Campbell Bldg., organized with \$150,000 capital and J. L. Dickey, Secy.; build plant for refining distillates under Parker process; daily capacity 500 bbls.; cost \$50,000 to \$55,000; material not purchased.

Okla., Oklahoma City.—Gasoline.—Gypsy Queen Oil & Gas Co. (lately noted inctpd. with \$100,000 capital) organized; A. F. Wood, Engr., 311 Campbell Bldg.; develop gas and oil property; lay pipe lines; install casing-head gasoline plant. (See Machinery Wanted—Piping; Gasoline Plant.)

Tex., Houston.—Bass Oil Co., capital \$10,000, inctpd. by T. H. Bass and M. B. Bass of Houston, and C. L. Bass of San Antonio.

Tex., Houston.—Ewing Oil & Development Co., capital \$300,000, inctpd. by T. J. Ewing, J. M. Boyle, A. A. Hinson and others.

Tex., Wichita Falls.—Dallas-Wichita Oil & Gas Co., capital \$20,000, inctpd. by A. C. Parker, J. D. Aldredge and Cloyd H. Read, all of Dallas.

Tex., Wichita Falls.—Peoples Oil Co., capital \$50,000, inctpd. by J. A. Hood and J. D. Cooper of Wichita Falls, and W. D. Snoddy of Vera, Tex.

W. Va., Elkins.—Midland Oil & Gas Co., capital \$100,000, inctpd. by W. N. Snedgar, Kirk King, John F. Nydegger and others.

W. Va., Wheeling.—Liberty Oil Co., capital \$6000, inctpd. by Geo. W. Oldham, J. W. Casey, J. F. Warden and others.

### HYDRO-ELECTRIC PLANTS

N. C., Badin.—Aluminum Co. of America, Jas. W. Rickey, Hydraulic Engr., Pittsburgh, Pa., will build second dam at Yadin Falls site, ml. below its Narrows Dam; new dam to consist of piers supporting story gates about 35 ft. wide by 30 ft. high; piers to rest on concrete sub-base; 50-ft. head; power-house to contain three 10,000 H. P. units; during flood times the gates will be raised, thus practically restoring river channel to original condition; this power intended merely to supplement power from Narrows Dam during low water periods.

### ICE AND COLD-STORAGE PLANTS

Miss., Vicksburg.—Merchants & Farmers Co-operative Creamery will install cold-storage plant.

Tex., Alvin.—Alvin Light & Ice Co., capital \$15,000, inctpd. by C. A. Levens, C. W. Martin and W. M. Galey.

Tex., Claude.—A. V. Wilson and O. F. Smalley will build ice factory. (See Electric Plants.)

Va., Rosslyn.—Arlington Ice & Storage Co., capital \$10,000, inctpd.; Wm. McGulre, Pres.; Henry Wassung (1513 Buchanan Ave.) Secy.-Treas.; both of Washington, D. C.

### IRON AND STEEL PLANTS

Ky., Ashland.—Steel Plant.—Ashland Steel Co. is reported to make general repairs and install new equipment.

### IRRIGATION SYSTEMS

Tex., Harlingen.—Cameron County Irrigation Dist. No. 1 will install engine and pumping plant; capacity of 36,000 to 60,000 gals. water per min.; maximum lift of 2 ft.; Directors of District receive bids until August 6. (See Machinery Wanted—Pumping Plant.)

### LAND DEVELOPMENTS

Fla., Jupiter.—Pennock Plantation, capital \$50,000, inctpd.; Henry S. Pennock, Pres.-Treas.; H. J. Wilkinson, V.-P. and Gen. Mgr.; A. B. Pennock, Secy.

Fla., Miami.—Snapper Creek Land Co., capital \$10,000, inctpd.; Chas. G. Barley, Pres.; J. W. Stephenson, Treas.; Edith M. Stephenson, Secy.

Ga., Port Wentworth.—Port Wentworth Terminal Corp., Savannah, Ga., Jas. Imbrie, Pres., 61 Broadway, New York, advises Manufacturers Record: Decided details for industrial city development; expend \$333,000 for dwellings, \$113,000 for water supply, \$68,000 for streets and \$50,000 for sewer system (see respective classifications); plans and specifications provide for above utilities and for lighting system, white and negro village on opposite shores of Savannah River, schools, stores, churches, parks, moving-picture theaters, hotels, etc.; include 2 hotels for transients, colonial style dwellings; Terry & Tench Co., Contr., Grand Central Terminal; Chas. Wellford Leavitt, Engr., 230 Broadway; both of New York; (3, 5, 6 and 8 rooms) in white village, and 250 bungalows (2 rooms) in negro district. (Lately noted)

N. C., Pantego.—Albemarle Farms Co., capital \$250,000, inctpd. by C. P. Aycock, P. H. Johnson and others.

Tex., Clarendon.—Eaman Land & Cattle Co., capital \$100,000, inctpd. by W. H. Patrick of Clarendon, T. J. Eaman of Kansas City, Mo., and J. H. Thatcher of Pueblo, Col.

Tex., San Benito.—Ogden Land Co., capi-

## THE OFFICIAL PROPOSAL ADVERTISEMENTS

Appear This Week On Pages 86 and 87

Notices of bond sales, construction and improvement contracts to be let, equipment and supplies to be purchased, franchises offered, etc., inserted in this department bring bids from the most important bond buyers, investors, financial institutions, contractors, engineers, architects, manufacturers, and supply houses throughout the country.

Rate 25 cents per line per insertion.

The PROPOSAL department goes to press 9 A. M. Wednesday for the issue of the following day. If you cannot mail advertisement in time for any particular issue please wire copy by night letter.

Send for booklet of testimonial letters from public officials who have used the PROPOSAL department of the Manufacturers Record, for bond sales, construction work, etc.

Ky., Floyd County.—Howard Oil & Gas Co. inctpd. by A. B. Broades and C. H. Doehler of Huntington, W. Va., W. W. Whyte of Welch, W. Va., and others.

Ky., Lexington.—American Oil & Gas Co., capital \$50,000, inctpd. by L. L. Roberts, F. G. Stitz, H. F. Wilkinson and others.

Ky., Louisville.—Kentucky Petroleum Co., capital \$10,000, inctpd. by Allen E. Moore of New York, F. H. Butehorn and Alfred F. McCabe of Brooklyn, N. Y.

Ky., Winchester.—Meadow Creek Oil & Gas Co., capital \$100,000, inctpd.; W. B. Hall, Pres., Detroit, Mich.; F. E. Bryum, Secy.-Treas., Anderson, Ind.

Ky., Winchester.—Bluegrass Oil Co., capital \$50,000, inctpd.; C. C. Stoll, Pres., and Leo Michael, Treas., both of Louisville, Ky.; C. M. Clark, V.-P., and S. E. Griffin, Secy., both of Cincinnati, Ohio.

Md., Baltimore.—American Petroleum Co. inctpd. with \$1,500,000 capital by Matthew Gault, 825 Equitable Bldg.; Harold Tchudi and Wm. D. Macmillan.

Mo., Kansas City.—Empire Oil & Gas Co., capital \$25,000, inctpd. by F. B. Scott, L. H. Schwald and I. N. Barry.

Mo., Kansas City.—Lucky Thirteen Oil Co., capital \$5500, inctpd. by Jas. H. Harkless, F. T. Haddock and E. S. Coombs.

Mo., Kansas City.—Van Noy Oil Co., capital \$20,000, inctpd. by C. S. Van Noy, V. E. Trueblood and A. L. Perry.

Okla., Bartlesville.—Cleve Oil & Gas Co., capital \$20,000, inctpd. by S. E. Bell, S. C. Brady and H. J. Gibney.

Okla., Halleyville.—Lucky Star Oil & Gas Co., capital \$30,000, inctpd. by G. L. Dodson, W. D. Jolly and G. T. Bradford.

Okla., Oklahoma City.—H. & G. Development & Operating Co., capital \$100,000, inctpd. by Alfred Hare, W. C. Greening and H. H. Hulten.

Okla., Okmulgee.—Beeler Oil & Gas Co., capital \$21,000, inctpd. by T. T. Beeler and others.

Okla., Pawhuska.—Drexel Oil & Gas Co., H. P. White, will install 1 or 2 power plants. Lately noted inctpd. with \$100,000 capital. (See Machinery Wanted—Piping; Pumping Plants.)

Okla., Sand Springs.—Oil Refinery.—Mohawk Refining Co. (subsidiary of White Star Refining Co., Detroit, Mich.) will build refinery with initial daily capacity 2000 bbls.

Okla., Sand Springs.—Oil Refinery.—Wabash Refining Co. is reported to build oil refinery.

Okla., Tulsa.—Gasoline.—Posey Gasoline Co., capital \$300,000, inctpd. by E. B. George, Isaac Shuler and B. F. McCune.

Okla., Tulsa.—Gasoline.—Hesco Gasoline Co., capital \$100,000, inctpd. by R. J. Lindsay and W. L. Felt of Tulsa, and H. D. Hildebrand of Pittsburgh, Pa.

Okla., Tulsa.—Tulsa Oil & Gas Co., capital \$50,000, inctpd. by L. L. Hutchinson, Chas. T. Kirk and A. B. Blair.

Okla., Waurika.—Beaver Valley Oil & Gas Co., capital \$1,000,000, inctpd. by L. W. Tar-kenton, Frank Beauman and C. T. Pledger.

Tex., Beville.—Possum Hill Oil Co., capital \$24,000, inctpd. by Seth S. Searcy of San Antonio and others.

Tex., Burkburnett.—Triangle Oil Co., capital \$44,000, inctpd. by J. A. Staley, J. G. Hardin, W. W. Graham and others.

Tex., Burkburnett.—Buck Drilling Co., capital \$15,000, inctpd. by W. D. Cline, J. Daniel, J. A. Stein and others.

tal \$1200, inctpd. by E. E. Ogden, Fred M. Weiser and W. G. B. Morrison.

W. Va., Charleston.—Glenwood Land Co., capital \$75,000, inctpd. by Vernon A. Cobb, Geo. I. Richmire, R. R. Richmire and others.

### LUMBER MANUFACTURING

Ala., Lisman.—Lisman Lumber Co., capital \$20,000, inctpd. by K. F. Darrah, Stanton Brown, W. G. Hedges and F. A. Kamper.

Fla., Fort Lauderdale.—Florida Lumber & Mill Co., capital \$5000, inctpd.; W. A. Davis, Prest.; Dorothy Gillian, V.-P.; Sam Gillian, Secy.-Treas.

Miss. Laurel.—Tewanta Lumber Co., capital \$50,000, inctpd. by S. M. Jones and Stone Deavours of Laurel, and W. W. Beatty of Gulfport, Miss.

Miss., Vicksburg.—Berge-Williamson Co., capital \$30,000, inctpd. by Alvin M. Berge and Geo. Williamson.

N. C., Bryson City.—R. E. Wood Lumber Co., 609-12 Continental Trust Bldg., Baltimore, Md., purchased 1800 acres timber land, containing hardwood, in Swain County; plans to erect band-saw mill.

Tenn., Dickson.—Crow Mfg. Co., capital \$6000, inctpd. by A. B. Crow, Geo. Crow, T. W. Crow and others.

Tenn., Memphis.—L. D. Murrelle Lumber Co. increased capital from \$10,000 to \$15,000.

Tex., Crystal City.—Crystal City Lumber Co., capital \$25,000, inctpd. by E. L. Reedy of Crystal City, A. B. Mayhew and Mrs. M. M. Isbell of Uvalde, Tex.

Tex., Hartburg.—S. M. Tomme & Sons Lumber Co., capital \$75,000, inctpd. by S. M. Tomme, C. E. Temme, E. L. Tomme and others.

Tex., Texier.—Four States Lumber Co. (lately noted under Texasiana as inctpd. with \$20,000 capital) organized; L. W. Krouse, Prest.-Mgr.; J. M. Badt, V.-P.; Fred H. Hoffman, Secy.; main office, Texarkana; expects to saw 25,000 ft. yellow pine and hardwood daily. (See Machinery Wanted-Boiler.)

Tex., Trinity.—Rock Creek Lumber Co., capital \$50,000, inctpd. by H. H. Thompson of Trinity, J. W. Reynolds of Houston, and J. W. Ferguson of St. Louis.

W. Va., Charleston.—Blue Tom Lumber Co., capital \$5000, inctpd. by G. W. Mathes, C. Loy, I. R. Fox and others.

### METAL-WORKING PLANTS

Va., Norfolk.—Sheet Metal.—Odenhal-Monks Corp. will erect sheet-metal factory; brick; cost \$6000.

### MINING

Ala., Gadsden.—Minerals.—Peters Mineral Land Co., capital \$25,000, inctpd.; L. L. Herzberg, Prest.; W. G. Bellenger and T. P. Henley, V.-Ps.; A. P. Reich, Secy.-Treas.

Ga., Adairsville.—Bauxite, etc.—Warner Mining Co., capital \$10,000, inctpd. by J. H. Warner and Porter Warener, both probably of Chattanooga, Tenn.

Mo., Joplin.—Zinc.—Fletcher Clear Mining Co., capital \$10,000, inctpd. by Fletcher Clear, J. C. Graham, W. J. Richards and others.

Mo., Kansas City.—Lumberjack Mining & Milling Co., capital \$5000, inctpd. by W. M. Edwards, W. C. Stone and H. L. Diercks.

Okla., Miami.—Lead and Zinc.—Triangle Mines Co. organized; N. C. Barry, Prest.; John D. Bomford, Secy.-Mgr.; Karl N. Sivcaem, Treas.; will build 3 mills, daily capacity 300 tons; install central power plant for all mills; probably use oil engines. Lately noted inctpd., capital \$50,000. (See Machinery Wanted-Concentrating Mill.)

Okla., Oklahoma City.—F. & F. Mining Co., capital \$100,000, inctpd. by J. N. Dyer, G. Frederickson and Whit M. Grant.

Tex., Snyder.—Gold.—M. M. Cooke, Civil Engr., Wichita Falls, Tex., is organizing company with \$50,000 capital to develop gold mines 8 mi. from Snyder.

### MISCELLANEOUS CONSTRUCTION

D. C., Washington.—Quay Wall.—Bureau Yards and Docks, Navy Department, Washington, D. C.—Bids until July 25 for timber work for extension to quay wall to be constructed at navy yard in accordance with specification and accompanying drawing; specifications (No. 2455) and drawing on application to Bureau or commandant of navy yard named.

Ga., Augusta.—Riprapping.—Government let contract A. J. Twigg & Sons of Augusta at \$33,000 to construct riprapping along waterfront. (Lately noted inviting bids.)

Miss., Vicksburg.—Levee.—Third Mississippi River Dist., Maj. J. R. Slattery, Engr., P. O. Box 404, let contract Hensel Co., Ltd., New Orleans, to construct 1,265,000 cu. yds. levee work on Arkansas River. (Lately noted inviting bids.)

Tex., Waxahachie.—Earth Work.—Ellis County Levee Improvement Dist. No. 8 will construct 280,000 cu. yds. earth work for levee on Onion Creek; bids until August 7; O. W. Finley, Engr., Ennis, Tex. (See Machinery Wanted-Earthwork.)

### MISCELLANEOUS ENTERPRISES

Ark., Fort Smith.—Industrial Laboratories. Industrial Laboratories, capital \$10,000, inctpd.; Henry Kaufman, Prest.; Ed. Ballman, V.-P.; Otto V. Martin, Secy.-Treas.

Ala., Tuscaloosa.—Abattoir and Pasteurizing Plant. City voted bonds to build abattoir and pasteurizing plant. Address The Mayor.

Ark., Little Rock.—Grain Elevator.—George Niemeyer Grain Co. organized with Geo. Niemeyer, Prest.; Guy F. Williams, V.-P. and Mgr.; erect fireproof building; install grain elevator, mixed feed plant and corn chop mill machinery; plans by Kaucher-Hodges Co., Memphis, Tenn. (Lately noted organized, capital \$50,000, to continue established enterprise and erect elevator.)

Mo., St. Louis.—Publishing.—Salesman Publishing Co., capital \$30,000, inctpd. by Karl L. Schnell, Geo. Rohrmoser and L. T. Madden.

Okla., Okmulgee.—Incinerator.—City Commissioners ordered election for August 7 to vote on \$30,000 bonds to build garbage incinerator.

S. C., Spartanburg.—Mineral Water.—Whitestone Mineral Springs Co., capital \$50,000, inctpd.; Arch B. Calvert, Prest.; Ansel F. Calvert, Secy.-Treas.

Tenn., Memphis.—Navigation.—Valley Navigation Co., capital \$5000, inctpd. by Chas. M. Bryan, John Galella, Jos. S. Tobin and others.

Va., Richmond.—Plumbing.—W. P. Longworth Heating Co., capital \$15,000, inctpd.; W. P. Longworth, Prest.

W. Va., Parkersburg.—Pressing Plant.—C. C. Stealey will erect building for pressing plant.

### MISCELLANEOUS FACTORIES

Ark., Fort Smith.—Lens Blanks.—Fort Smith Glass Products Co., capital \$46,000, inctpd.; Robt. Malcom, Prest.; Geo. L. Hammons, V.-P.; C. A. Friedrich, Secy.-Treas.; (Previously reported organized to build plant, main building to be 260x48 ft., with right angle 60x80 ft.; finishing plant 120x24 ft., both of brick construction, and several smaller buildings.)

Ga., Augusta.—Bottling.—Coca Cola Bottling Co., A. T. Teach, Mgr., will remodel building and install duplicate equipment to double capacity.

Ky., Louisville.—Caps.—Columbia Cap Co., capital \$1000, inctpd. by L. Edmund Huber, Walter J. Hoeftin and Carl J. Crouch.

Ky., Louisville.—Tobacco.—American Tobacco Co. (New York office, 111 Fifth Ave.) will erect addition; brick; cost \$13,000.

Ky., Louisville.—Turpentine, etc.—Southern Products Co., capital \$60,000, inctpd. by C. J. Murphy and Frank Heath of Louisville, and M. J. Daly of Cincinnati, Ohio.

Ky., Paducah.—Cigars.—American Cigar Co. (main office, 111 Fifth Ave., New York) is reported to enlarge plant.

La., Lake Charles.—Rice.—Farmers Rice Milling Co., capital \$100,000, organized; acquires Manchester rice mill; W. P. Weber, Prest.; H. V. Lanz, V.-P.; G. M. King, Secy.-Treas.

Md., Baltimore.—Buggy Tops.—Baltimore Buggy Top Co., 107 W. Mount Royal Ave., will receive estimates from following contractors on erection of plant on Calvert St., between Mount Royal Ave. and Preston St.; G. Walter Tovell, Eutaw and McCulloh Sts.; Cogswell-Koether Co., 406 Park Ave.; Price Concrete Construction Co., Maryland Trust Bldg.; B. F. Bennett Building Co., 123 S. Howard St.; Edward G. Turner, 15 E. Fayette St.; Walter E. Burnham, 808-09 Law Bldg.; John Hiltz & Sons, 3 Clay St.; Clarence E. Stubbs, Equitable Bldg.; Gladfelder & Chambers, 26th and Roland Ave.; H. D. Watts Co., 904-06 Garrett Bldg.; all of Baltimore; plans by Clyde N. Friz, 1523 Munsey Bldg., Baltimore. (Noted in June.)

Mo., Kansas City.—Chemicals.—Page-Love Chemical Co. increased capital from \$10,000 to \$50,000.

N. C., Charlotte.—Vaccines, etc.—Hanley of Charlotte, and Tait Butler (State Veterinarian), Raleigh, N. C., are planning organization of company to manufacture vaccines, serums, etc.

N. C., Durham.—Tobacco.—Durham Tobacco Mfg. Co., capital \$10,000, inctpd. by Geo. H. Beall, R. L. McGhee and others.

N. C., Elizabeth City.—Bottling.—Albemarle King Cola & Dixie Flip Corp. organized; Paul White, Prest.; Alford Sawyer, V.-P.; C. K. Pugh, Secy.-Treas.; install bottling machinery costing \$3500; purchased equipment; daily capacity 100 cases. (Lately noted inctpd. with \$25,000 capital.)

N. C., Roxboro.—Tobacco.—Meade-Harvey Co. organized; Randolph Meade, Prest.; W. D. Powell, V.-P.; J. Shields Harvey, Secy.-Treas.; leased buildings; has machinery; handling, drying and dealing in leaf tobacco. (Lately noted inctpd.)

N. C., Wilmington.—Pulp and Paper.—Old North State Pulp & Paper Co., W. H. Crocker, Prest., Murchison National Bank Bldg., increased capital from \$125,000 to \$2,000,000; wires Manufacturers Record: Making preparations to build paper mill with daily capacity 100 tons. Advises by mail: Have 50-acre site; build plant in 50-ton units. (Previously noted inctpd., etc.)

N. C., Wilmington.—Bakery.—American Baking Co., capital \$20,000, inctpd. by Geo. T. Johnson, J. S. Craig and others.

Okla., Muskogee.—Klanke Mfg. Co., capital \$3000, inctpd. by E. E. Klanke, Andrew Watterson and Ed Hirsch.

S. C., Columbia.—Bottling.—Busch Distributing Co., capital \$20,000, inctpd.; Sam Barron, Prest.; Jules Mann, Secy.-Treas.

S. C., Gaffney.—Gloves.—Chamber of Commerce and Agriculture arranged to organize company to build canvas glove factory; daily capacity 200 doz. pairs gloves.

Tenn., Kingston.—Angel Mfg. Co. (E. C. Angel and others) increased capital from \$4000 to \$5000.

Tenn., Knoxville.—Overalls.—Knoxville Overall Co., John Bowman, Prest., 315 State St., will build plant; 3 stories and basement; 75x125 ft.; brick; cost \$40,000; contract let; now has 150 machines and will install 75 additional machines; increase daily capacity from 200 dozen to 350 dozen overalls.

Tenn., Nashville.—Candy.—Roberts Candy Co. increased capital from \$5000 to \$15,000.

Tex., Dallas.—Paper.—Cotton Stalk Fiber Co. organized with Z. E. Marvin, Prest.; A. C. Eble, V.-P.; E. W. Rose, Treas.; E. P. Angus, Secy.; erect mill to manufacture paper from cotton stalks. (Noted in June as inctpd. with \$30,000 capital.)

Tex., Dublin.—Peanut Products.—Bencini Cotton Oil Mill will enlarge plant and remodel to manufacture peanut products; cost \$100,000.

Va., Roanoke.—Overalls.—Blue Ridge Overall Co. increased capital from \$25,000 to \$125,000.

### MOTOR CARS, GARAGES, TIRES, ETC.

Ky., Lexington.—Automobiles.—Mammoth Motor Co., capital \$30,000, inctpd. by Brooks, J. C. Larkin and J. J. Taylor.

La., Jennings.—Garage.—Jennings Motor Car Co. (Ford Automobile Agency) let contract Knapp & East of Lake Charles to erect garage; 60x150 ft.; brick; contain garage, storeroom and offices; cost \$11,000; plans by F. W. Steinman of Beaumont, Tex. (Lately noted.)

La., New Orleans.—Motor Trucks.—Forscher Motor Truck Mfg. Co. let contract to Jas. Geary, Perrin Bldg., New Orleans, to erect 147x230-ft. ordinary-construction building, cost \$8800; plans by Paul Andry, 510 Tulane-Newcomb Bldg., New Orleans. (Lately noted.)

Md., Baltimore.—Garage.—Wm. A. Harris will erect garage at 3122-3124 Greenmount Ave.; 1 story; brick; 48x136 ft.; J. C. Spedden, Archt., 1640 Hanover St.; John J. Moylan, Contr., 538 N. Calvert St.; both of Baltimore.

Mo., Kansas City.—Garage.—B. Wortman will erect garage at 2513-2515 Swope Parkway; 1 story; brick; cost \$5000.

Mo., Kansas City.—Automobiles.—P. J. Downes Motor Co., capital \$100,000, inctpd. by P. J. Downes, J. A. Keating and A. F. Manning.

Mo., St. Louis.—Automobiles.—Dearborn Motor Sales Co., capital \$10,000, inctpd. by C. A. Aldrich, Eugene Blodgett and C. P. Reid.

N. C., Durham.—Garage.—Durham Traction Co. will erect garage and stables; cost \$10,000.

Okla., Kingfisher.—Garage.—M. A. Ball contemplates building garage; cement blocks; 55x120 ft.

Okla., Muskogee.—Automobiles.—Muskogee Motor Car Co., capital \$12,000, inctpd. by M. Board, W. E. Rowsey and C. E. Harris.

S. C., Charleston.—Motor Trucks.—Southern Auto & Truck Co., capital \$5000, inctpd.; S. J. Rump, Prest.; H. M. Ostendorf, Secy.; E. E. Hartmann, Treas.

S. C., Georgetown.—Automobiles.—Winyah Motor Co., capital \$3000, inctpd. by Sam E. Mercer, J. M. Powell, P. H. Pow and others.

S. C., Greenville.—Garage.—Parrish, Gower & Simms will erect garage; cost \$6500; Skelton & Owens, Contrs.

S. C., Greenville.—Automobiles.—Dixie Auto Co., capital \$5000, inctpd.; W. B. Stafford, Prest.; P. N. Scott, V.-P.; C. B. Scott, Secy.-Treas.

Tex., Ballinger.—Garage.—Gus Noyes, Melvin, Tex., will build garage; 100x60 ft.; let contract to John F. Drew, Lometa, Tex.

Tex., Hillsboro.—Automobiles.—Hill County Motor Co., capital \$5000, inctpd. by T. E. Porter, Guy C. West and C. E. O'Brien.

Tex., Houston.—Tractors.—South Texas Tractor Co., capital \$5000, inctpd. by J. E. Ervine, J. E. Bishop and W. C. McLelland.

Va., Lynchburg.—Garage.—Hudson & Morgan Motor Co. will remodel building at 519-21 Main St.; install machine, electric and storage battery repair shops; Smott & Sheehan, Contrs.

Va., Petersburg.—Garage.—Geo. B. Carter will erect public garage; concrete and iron; fireproof; steam heat; cost \$40,000.

W. Va., Wheeling.—Automobiles.—Hopkins Motor Co., capital \$10,000, inctpd. by Geo. E. Hopkins, W. S. Irwin, Jos. R. Curl and others.

W. Va., Wheeling.—Automobiles.—Hopkins Motor Co., capital \$10,000, inctpd. by Geo. E. and Elliott B. Hopkins, W. S. Irvin and others.

### ROAD AND STREET WORK

Ala., Ashland.—Clay County will construct 300 sq. yds. concrete pavement, 130 lin. ft. curb and gutter, 300 ft. 18-in. vitrified pipe, etc.; County Commrs. receive bids until July 28; W. P. Moon, County Engr. (See Machinery Wanted-Paving, etc.)

Ala., Gadsden.—City will construct 6500 sq. yds. asphaltic concrete pavement on 5-in. concrete base, 2300 ft. curb and gutter, including driveways, etc., and 900 ft. storm sewers; bids opened July 23; Ernest Smith, City Engr., City Hall. (See Machinery Wanted-Paving.)

Ark., Berryville.—Carroll County Commrs. issued \$75,000 bonds for road improvements.

Ark., De Vall Bluff.—Prairie County, Road Improvement Dist. No. 3, will construct 2 1/2-mi. macadam road; 4420 cu. yds. embankment, 86 cu. yds. concrete, 4066 tons crushed rock; Commrs. of Dist., W. H. Wheeler, Prest., receive bids until Aug. 6. (See Machinery Wanted-Road Construction.)

Ark., De Witt.—Arkansas County Commrs. have plans by State Highway Com., Little Rock, for 13 mi. gravel road from Stuttgart to Hagler; cost \$33,007.

Ark., Lonoke.—Lonoke County Commrs. have plans by State Highway Com., Little Rock, for 13 1/2 mi. bituminous gravel road from Coy east to Brummitt and Prairie County line; cost \$141,582.

Ark., Mt. Ida.—Montgomery County Commissioners have plans by State Highway Com., Little Rock, to construct 47 mi. of earth road from Womble north to Mount Ida, east to county line, west to Polk County line and south of Pike County; cost \$26,357.

Ark., Piggott.—Clay County Commrs. are considering construction of road between Piggott and Corning, 2 county seats of Clay County; \$16,000 of Government funds available if County contributes similar sum. R. L. Lewis, County Judge.

Ark., Pine Bluff.—Jefferson County Commissioners let contract W. P. McGeorge & Co. to construct 18 mi. gravel road in Road Improvement Dist. No. 19.

Ark., Pine Bluff.—Jefferson County, Road Improvement Dist. No. 21, let contract W. P. McGeorge & Co. to construct roads; also let separate contracts for gravel and asphalt; total cost \$38,234.30.

Ark., Walnut Ridge.—Lawrence County Commrs. have plans by State Highway Com., Little Rock, for 13 mi. macadam road, from Lauratown north to Black Rock; cost \$80,268.

Fla., Key West.—Monroe County Commissioners ordered election for Aug. 14 to vote on \$100,000 bonds to construct roads.



Fla., Leesburg.—City will vote on \$20,000 bonds to pave streets. Address The Mayor.

Fla., Milligan.—Okaloosa County, Special Road and Bridge Dist., voted \$50,000 bonds to grade and hard-surface road to Niceville, Camp Walton and other points on Gulf. Address County Comms.

Fla., Panama City.—Bay County Comms. let contracts to Maxon-Smith & Co. and Jordan & Phillips, Montgomery, Ala., for road constructing costing \$140,000; to T. B. Young, Sneads, Fla., for road construction costing \$130,000 and bridge work costing \$30,000; receive bids until July 30 for 108 mi. of additional road building; E. V. Camp, Const. Engr., Atlanta, Ga. Supersedes recent item. (See Machinery Wanted—Road Construction.)

Fla., St. Augustine.—St. Johns County Comms. will order election to vote on bonds to construct 70 mi. roads and reinforced concrete bridge 1/2 mi. long across Matanzas River to connect St. Augustine and Anastasia Island with another bridge. C. E. Henderson, Chief Engr. of county, will supervise construction.

Ga., Port Wentworth.—Port Wentworth Terminal Corp., Savannah, Ga., Jas. Imbrie, Pres., 61 Broadway, New York, advises Manufacturers Record: Expend \$68,000 for street improvements; industrial city development; Terry & Tench Construction Co., Contr., Grand Central Terminal; Chas. Wellford Leavitt, Engr., 230 Broadway; both of New York. (Lately noted planning street paving.)

Ga., West Point.—City receives bids until August 7 for sidewalks, curbing, grading, draining and paving with either concrete, vitrified brick, sheet asphalt or patented pavements; 400 cu. yds. excavation; 10,500 lin. ft. granite or concrete curbing; 4600 sq. yds. sheet cement sidewalks; 32,000 sq. yds. street pavement; storm-water sewers; plans, etc., at office L. Strong, City Clerk; copies obtainable from Knox T. Thomas, Const. Engr., 502 Forsyth Bldg., Atlanta, Ga. (See Machinery Wanted—Paving, etc.)

La., Cameron.—Cameron Parish, Hackberry District, will construct road from Hackberry across Bayou Kelso and connecting with Calcasieu Parish highway; voted \$13,000 expenditure.

La., Kenner.—Town Council is reported to have authorized \$25,000 bonds to improve streets. Address The Mayor.

Md., Baltimore.—City will grade, curb and pave Woodberry Ave. from Pimlico Circle to Green Spring Ave.; Contract No. 155-A; 4900 sq. yds. cement concrete paving, 3700 sq. yds. sheet asphalt paving, 4/0 cu. yds. grading and 4000 lin. ft. combination concrete curb and gutter; bids until Aug. 1; John H. Robinson, Pres. Comms. for Opening Streets. (See Machinery Wanted—Paving.)

Md., Elkton.—Cecil County will construct 1 1/2-mi. State-aid highway upon or along Telegraph Rd. from top of eastern Big Elk Hill to Delaware State line; County Commissioners, P. M. Groves, Clerk, receive bids until Aug. 3. (See Machinery Wanted—Road Construction.)

Md., Rockville.—Montgomery County Commissioners, John R. Lewis, Pres., will construct section State-aid highway upon or along street connecting Norbeck State Rd. with Frederick and Darnestown Rds. at town limits of Rockville; 21,000 sq. yds. concrete for 1 1/2 mi.; bids until Aug. 7. (See Machinery Wanted—Road Construction.)

Miss., Biloxi.—City let contract Calhoun Construction Co. of Omaha, Neb., Dallas, Tex., and other cities, to resurface streets; contract is contingent upon voting of bond issue. (City Council lately noted to have authorized \$40,000 bond issue; \$35,000 to be for street surfacing and \$5000 for drainage.)

Miss., Friars Point.—City will construct 120,000 sq. ft. concrete sidewalks; bids until August 7; M. Y. Scott, City Clerk. (See Machinery Wanted—Paving.)

Mo., Benton.—Scott County votes Aug. 1 on \$750,000 bonds to construct roads. Address County Comms.

Mo., New Madrid.—New Madrid County votes Aug. 3 on \$850,000 bonds to construct roads. Address County Comms.

N. C., Clayton.—City will construct cement sidewalks. Address The Mayor.

N. C., Hendersonville.—City contemplates street paving; W. M. Bacon, member City Council. (See Machinery Wanted—Paving.)

N. C., Mount Holly.—Town will issue \$10,000 bonds to construct sidewalks, curbs and gutters with brick, stone, concrete or similar material. W. T. Johnson, Town Clerk.

N. C., Smithfield.—Town will pave 7 blocks in business district; expend \$3000 to \$10,000

to construct sidewalks. Address Town Clerk.

Okla., Altus.—City Council approved plans for paving 4 additional blocks on South Main St. Address The Mayor.

Okla., Buffalo.—Harper County Good Township is reported to have voted \$13,500 bonds to construct roads. Address County Comms.

Okla., Okmulgee.—City Comms. ordered election for August 7 to vote on \$145,000 bonds for sewer system; plans by Benham Engineering Co., Oklahoma City, provide for large intercepting sewers, extending main sewers, installing sewage-disposal plant with Imhoff tanks and sprinkling filter, etc. (Lately noted.)

Tenn., Chattanooga.—Hamilton County Highway Commission will construct solid concrete highway from foot of Lookout Mountain to its summit, 2 1/2 mi.; grade not to exceed 6 per cent.; Commission appropriated \$25,000; property owners of district to contribute equal sum.

Tenn., Savannah.—Hardin County will construct 40 mi. gravel road; Highway Com., J. E. Holland, Chmn., receives bids until Aug. 16; F. M. Patton, Engr., Savannah. (See Machinery Wanted—Road Construction.)

Tenn., Springfield.—Robertson County voted \$150,000 bonds to improve roads. Address County Comms. (Previously noted to vote.)

Tenn., Wartburg.—Morgan County Commissioners let contract Arthur B. Long of Victoria, Tenn., and W. M. Lee of Lansing, Tenn., at \$20,000 for road surfacing; crushed sandrock and chert.

Tex., Canadian.—Hemphill County defeated bonds for road construction. (Lately noted voted.)

Tex., Dallas.—Dallas County Comms. ordered election for August 21 to vote on \$1,000,000 bonds to construct roads, including Fort Worth, East, Richardson and Lancaster Pikes.

Tex., Franklin.—Robertson County Commissioners will expend \$20,000 to improve roads.

Tex., Fort Worth.—City will grade and gravel East Fourth St. from Harding St. to East Fourth St. Bridge and Harding St. from East Third to East Fourth St.; 3000 cu. yds. gravel; 700 cu. yds. excavation; bids until July 31; F. J. Von Zuben, City Engr. (See Machinery Wanted—Paving.)

Tex., Hamilton.—City voted \$20,000 bonds to improve streets. Address The Mayor.

Tex., Pittsburg.—Camp County, Road Dist. No. 2, votes Aug. 6 on \$35,000 bonds to macadamize, gravel and pave roads; C. Everett Bryson, County Judge.

Tex., Victoria.—City let contract Uvalde Rock Asphalt Co. of Beaumont and San Antonio at \$104,521.25 to pave 40,000 sq. yds., or 33 blocks, with Uvalde rock asphalt; J. A. Block, Engr., Victoria; August Klein, Mayor. (Lately noted inviting bids.)

Va., Lynchburg.—City let contract Burnett Bros. of Lynchburg at \$13,000 to construct rubble stone roadway on Campbell Court-house Turnpike from Grace St. to city limits; H. L. Shaner, City Engr. (Lately noted inviting bids.)

Va., Richmond.—City will grade and pave alleys, grade streets and place vitrified brick gutters; Chas. E. Bolling, City Engr., receives bids until July 27. (See Machinery Wanted—Paving.)

W. Va., Carlisle.—Town votes in November on \$50,000 bonds to pave streets. Address Town Clerk.

W. Va., Edgwood, P. O. at Wheeling.—Town voted \$132,000 bonds for street improvements; C. M. Criswell, Mayor.

W. Va., Logan.—Logan County Comms. let contract Hunt-Ford Construction Co. to construct dirt road, including bridges and culverts, from Holden to Blair, 12 or 14 mi.; work provided for under \$200,000 bond issue.

W. Va., Wayne.—Wayne County is reported to vote on \$1,000,000 bonds to construct roads. Address County Comms.

#### SEWER CONSTRUCTION

Fla., Leesburg.—City will vote on \$40,000 bonds to construct sewers. Address The Mayor.

Ga., Port Wentworth.—Port Wentworth Terminal Corp., Savannah, Ga., Jas. Imbrie, Pres., 61 Broadway, New York, advises Manufacturers Record: Construct sewer system costing \$50,000 for industrial city development; to include street sewage, 8 mi. 8 to 12-in. pipe, and \$3000 settling tank for 3000 population; Terry & Tench

Co., Contr., Grand Central Terminal; Chas. Wellford Leavitt, Engr., 230 Broadway; both of New York. (Lately noted planning to construct sewers.)

N. C., Charlotte.—Loulise Cotton Mills will construct sewer system to connect each dwelling in cotton-mill village.

Okla., Altus.—City Council approved plans and profiles for \$15,000 extension of sewer system. Address The Mayor.

Okla., Fairfax.—City contemplates constructing 3400-ft. lateral sewer; Henry Fulton, Engr., Oilton, Okla.; C. R. Shanklin, City Clerk.

Tex., San Antonio.—City Com. appropriated \$25,000 to construct sewage-pumping station at Sherman and Waldorf Sts., to be built in connection with construction of sewer system in Camp Wilson.

#### SHIPBUILDING PLANTS

Fla., Apalachicola.—Chamber of Commerce, J. F. Warren, Secy., advises Manufacturers Record: Shipbuilding corporation organized with \$50,000 capital; will build shipyards; expect to construct vessels up to 1000 tons; after beginning operations will ask Government to deepen channel; now 12 ft.

Fla., Fernandina.—Fernandina Shipbuilding & Drydock Co., organized with \$1,000,000 capitalization; purchased waterfront property; proposes to construct shipbuilding plant.

Fla., Tampa.—Tampa Shipbuilding & Engineering Co. expects to erect its third machine shop and a pipe-bending shop, joiner shop and sawmill; reinforced concrete construction.

Md., Baltimore.—Chesapeake Shipbuilding Co. inceptd. with \$100,000 capital by Sheldon H. Tolles, Kernode F. Gill, Jas. H. Foster and Roger C. Hyatt, all of Cleveland, O.

Md., Baltimore.—Henry Smith & Sons Co., German and Light Sts., will construct shipbuilding plant on Curtis Creek; has 10-acre site; now clearing land; will repair and extend pier on property; construct ships of yellow pine.

Md., Baltimore.—Howard E. Crook Co., 28 Light St., will construct 6 marine ways and probably additional ways in the future; build several corrugated-iron buildings, including one for machine shop; establishing shipbuilding plant on site, including 900-ft. water front; at first construct wooden vessels and later provide facilities for building steel ships. (Lately noted increasing capital from \$120,000 to \$250,000 and to build shipyards.)

Miss., Moss Point.—Hine-Hodge Lumber Co., Hodge, La., will construct shipbuilding plant; has 40-acre site on East Pascagoula River.

Miss., Pascagoula.—Dierks-Blodgett Co. will build shipyard on Pascagoula River; has site; will dredge 1000x125x16-ft. channel; construct machine shop and modeling-room.

Miss., Pascagoula.—Kelly-Atkinson Construction Co., Chicago, will construct shipbuilding plant; secured 1073x1073-ft. site on East Pascagoula River. (Lately noted having option on large river frontage.)

S. C., Beaufort.—American Shipbuilding & Dock Corp. inceptd. with \$320,000 capital by R. C. Horne, Jr. and W. E. Richardson, both of Beaufort, and Charton G. Ogburn of Savannah, Ga.; plans to construct shipbuilding plant. Mr. Tolles wires Manufacturers Record: Plans not sufficiently developed to give information.

Tex., Beaumont.—Crowell Shipbuilding Co. will not build shipyards. (Recent notice was an error.)

Tex., Beaumont.—Beaumont Shipbuilding & Drydock Co. chartered with \$300,000 capital by Walter J. Crawford of Beaumont, B. F. Bonne and Geo. Howard of Houston, S. A. McGeath of New York and others; build shipyards. (Lately noted organized, etc., including following: J. W. Link, Pres.; C. O. Yoakum, Vice-Pres. and Gen. Mgr.; construct shipbuilding plant on Island Park; plans include 250x60-ft. mill building and mold loft, 40x25-ft. blacksmith and repair shop, 20x30-ft. paint-storage building, 40x30-ft. oakum-storage house, 40x25-ft. power-house, 100x50-ft. warehouse for heavy machinery and other materials; build ships of long-leaf yellow pine; largest vessel of 400 tons capacity; build ships for own use and lumber manufacturing interests; also build 300-ton ships for Government; within few months plan to add dry dock.)

Tex., Orange.—Sabine-Neches Shipbuilding

Co. reported organized to construct shipbuilding plant.

#### TELEPHONE SYSTEMS

Ala., Albany.—Southern Bell Telephone & Telegraph Co. (main office, Atlanta, Ga.) J. B. Cassels, Dist. Mgr., will erect 3-story exchange.

Tex., Celeste.—Celeste Telephone Co., capital \$15,000, inceptd. by W. E. Braley, J. W. Ewing and A. W. Ewing.

#### TEXTILE MILLS

Ala., Talladega.—Cotton Cloth.—Chinnabee Cotton Mill is reported to build additions.

Ala., Talladega.—Cotton Cloth.—Highland City Cotton Mill is reported to build additions.

Ga., Palmetto.—Palmetto Cotton Mills will install equipment for electric drive; purchase electric power; use 450 H. P. group drive.

N. C., Asheboro.—Hosliery.—Asheboro Hosliery Mills will add 30 knitting machines; has ordered.

N. C., Burlington.—Hosliery.—Cates Hosliery Co. inceptd. with \$50,000 capital by Walter L. Cates, C. H. Cates and Jno. B. Cheek.

N. C., Gastonia.—Cotton Goods.—Gray Mfg. Co. increased capital to \$600,000.

N. C., Greensboro.—Knit Goods.—J. E. Latham Co. advises Manufacturers Record: Will install knitting mill; capital about \$100,000; need machinery. (See Machinery Wanted—Bleaching, Dyeing and Finishing (Knitting Mill) Machinery.)

S. C., Charleston.—Artificial Fabrics.—Charleston Mills Co. organized; J. H. Weil, Pres.; C. C. Groat, V.-P.; has building with 12,000 ft. floor space; install \$8000 equipment to manufacture artificial fabrics; purchased machinery. (Lately noted inceptd. with \$75,000 capital.)

Tenn., Chattanooga.—Textile Products.—Standing Processing Co. increased capital from \$100,000 to \$400,000; provides funds for additions heretofore detailed.

Tex., Houston.—Waste.—Texas Waste Mills, capital \$10,000, inceptd. by L. E. Stenger, H. A. Varner, F. M. Varner and D. D. Wooten.

#### WATER-WORKS

Ark., Winchester.—City plans \$2000 expenditure for water-works extension lately noted; new pumping equipment for 72,000-gal. daily installation; C. A. Myers, Mayor. (See Machinery Wanted—Pumping Plant.)

Fla., Leesburg.—City will vote on \$40,000 water and light bonds. Address The Mayor.

Ga., Port Wentworth.—Port Wentworth Terminal Corp., Savannah, Ga., Jas. Imbrie, Pres., 61 Broadway, New York, advises Manufacturers Record: Expend \$113,000 to provide water supply for industrial city development; 3000 population; Terry & Tench Co., Contr., Grand Central Terminal; Chas. Wellford Leavitt, Engr., 230 Broadway; both of New York.

Ga., Savannah.—City votes Oct. 9 on \$500,000 bond issue to rehabilitate water-works; E. R. Conant, Ch. Engr. Water-works. (Noted in June as considering bond issue.)

Md., Cumberland.—City let contract Bell Bros. & Co. of Cumberland at \$5319 to construct Dry Run conduit; work embraces 250-ft. concrete conduit, 230-sq.-ft. concrete bottom for present conduit, etc.; Ralph L. Rizer, City Engr. (Lately noted inviting bids.)

Md., Cumberland.—City will construct reservoir in Ridgecreek Addition to Cumberland; City Clerk invites bids until Aug. 20; plans and specifications by Jas. H. Fuentes, Engr., New York.

Mo., Canton.—City voted \$10,000 bonds to improve water and electric-light systems. Address The Mayor. (Lately noted to vote.)

Okla., Ada.—City Comms., W. E. Conger, City Clerk, ask bids until Aug. 1 to construct reinforced concrete flume about 400 ft. long, 36 in. diam., and 500,000-gal. 110-ft.-high elevated tank of either reinforced concrete or steel construction; also for 10,000 ft. cast-iron pipe, with special castings and fire hydrants; Engr., Benham Engineering Co., Colcord Bldg., Oklahoma City. Lately noted. (See Machinery Wanted—Water-works Construction.)

Okla., Okmulgee.—City Comms. ordered election for August 7 to vote on \$390,000 bonds to improve and extend water-works; plans by Benham Engineering Co., Oklahoma City, provide for water-purification plant costing \$390,000, raising dam for additional storage, river protection work, 16-in. force

main, mains for city additions, remodeling pumping station, etc. (Lately noted.)

Okla., Ryan.—City will build filter plant; concrete construction; capacity 200,000 gals.; cost \$16,000; J. M. Sawyers, Chrmn. Town Board.

Okla., Lawton.—City will construct water pipe line from dam at Lake Lawtonka to Lawton, 12 mi.; City Commrs., J. M. Haynes, Secy., City Hall, receive bids until July 29; lately noted to expend \$380,000 for water-works improvements (including pipe line and enlargement of dam) to increase daily capacity to 3,000,000 gals.; John D. Kennard being engineer. (See Machinery Wanted—Water-works Construction.)

Okla., Red Rock.—Board Trustees, Clyde Cady, City Clerk, asks bids until Aug. 13 to construct water-works system; sink open emission well, build pump house and install 250 G. P. M., 200-ft. head, triplex pump, geared 25 H. P. oil engine, 30,000-gal., 115-ft.-high elevated tank, 7500 ft. mains, etc.; Engr., Benham Engineering Co., Colcord Bldg., Oklahoma City. (See Machinery Wanted—Water-works.)

Okla., Shamrock.—City votes August 4 on \$40,000 bonds to construct water-works station. Address The Mayor.

Tenn., Trezevant.—City defeated \$12,500 bonds to acquire and improve water-works; may vote again. Address The Mayor. (Lately noted.)

W. Va., Marlinton.—City votes July 20 on municipal ownership of local water-works and electric plant. Address The Mayor.

### WOODWORKING PLANTS

Ala., Mobile.—Cooperage.—H. D. Williams Cooperage Co., Montgomery, will build cooperage.

Ark., Eldorado.—J. W. Maxwell will establish spoke and handle factory.

Ark., Monette.—Staves.—Monette Stave Co. increased capital from \$10,000 to \$20,000.

La., Jonesville.—Veneer Shooks.—Jonesville Lumber & Veneer Co., A. W. Stewart, Pres., will build plant to manufacture veneer shooks for wire-bound boxes; daily capacity 20,000 ft.; erect buildings of ordinary mill construction costing \$25,000; W. P. Craft, Engr.; lately noted organized to build hardwood mill. (See Machinery Wanted—Boilers; Engines.)

Miss., Brookhaven.—Handles.—Michigan Handle Co. will enlarge plant; manufacture hickory spokes and automobile wheels.

Miss., Greenville.—Barrel Hoops.—Queen City Hoop Co. will build plant to manufacture barrel hoops; 5-acre site.

Miss., Nicholson.—Veneer.—State Lumber Veneer Co., capital \$10,000, inceptd. by E. R. Brand and J. T. Chollinger of Nicholson, and T. B. Mobley of New Orleans, La.

W. Va., Williamson.—Veneer and Package. West Virginia Veneer & Package Co., capital \$500, inceptd. by E. K. Ahrendt, J. V. Reyburn, J. D. Reisch and others, all of Parkersburg, W. Va.

### FIRE DAMAGE

Fla., Lake City.—N. B. Long's residence; loss \$500.

Ga., Millen.—Miles Edenfield's residence; loss \$300.

Ky., Moorefield.—Cosby Vice's store; Swango Bldg.; postoffice; Dr. Clarence Kash's office; C. G. Cole & Company's building and warehouse; Seamon's shop and garage; Blount's stable; loss \$14,000.

Ky., Paducah.—Hardy Buggy Co.'s plant at Harrison and 8th Sts.; building was owned by B. H. Scott estate; total loss \$20,000.

La., Baton Rouge.—Baton Rouge Macaroni Factory; loss \$200.

Md., Hightfield.—J. M. Harding's residence; loss \$500.

N. C., Laurel Hill.—Springfield Cotton Mill.

N. C., Walnut Cove.—M. A. Walker & Co.'s brick plant; loss \$500.

N. C., Walnut Cove.—M. A. Walker & Co.'s boiler and engine-house of brick plant.

Okla., Chickasha.—Chickasha Ice & Cold Storage Co.'s plant; loss \$25,000.

Okla., Wirt.—Star Theater and 10 other buildings; estimated loss \$85,000.

Tenn., Bristol.—Bristol Chemical-Works at Rebecca and Moore Sts.

Tenn., Rockwood.—George W. Ault's residence at Post Oak Springs, 4 mi. from Rockwood; loss \$800.

Tex., Bryan.—P. J. Palasota's residence; loss \$4500.

Tex., Dallas.—City Hospital, loss \$20,000. Address The Mayor.

Tex., Newton County.—Orange County Irrigation pumping plant in Newton County, about 8 mi. from Orange. Address Orange County Commrs., Orange, Tex.

Tex., Rockport.—Arthur Mathis' residence; loss on building and contents \$15,000.

Tex., Waco.—Queen Theater, owned by J. E. Horne; loss \$35,000; Waco Hotel, owned by Geo. H. Wiebusch; loss \$50,000; Southland Barber Shop.

Va., Norfolk.—T. J. East's residence, 3512 Granby St.; loss \$4000.

W. Va., Institute.—Dawson Hall (domestic science and arts building) at West Virginia Collegiate Institute.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### APARTMENT-HOUSES

D. C., Washington.—Howard Etchison, Chevy Chase, Md., will erect apartment-house, 1812 Vernon St. N. W.; cost \$30,000.

Fla., Miami.—Carl Fisher is having plans prepared by August Geiger, Miami, for improvements to Lincoln Apartments to include addition to dining-room and kitchen; cost \$3500; also having plans prepared by Mr. Geiger for alterations to first floor and 2-story addition to dwelling containing 4 bedrooms and 2 baths; cost \$6500.

Fla., St. Petersburg.—S. D. Sprague will erect \$4000 apartment-house.

Fla., St. Petersburg.—Dr. W. J. Tanner will erect apartment-house; 2 stories; four 4-room suites; plans prepared.

Ga., Atlanta.—Mrs. Mattie A. Ford will erect brick-veneer apartment-house; cost \$6000.

Md., Baltimore.—Mayor James H. Preston is having plans prepared by Alfred Cookman Leach, 323 N. Charles St., Baltimore, for converting dwelling at St. Paul and Read Sts. into apartment-house.

Mo., Kansas City.—F. J. Isaacs will erect 2-story 12-apartment brick flat; cost \$15,000.

Mo., Kansas City.—McCanlies Realty Co. will erect seven 3-story, 6-apartment flats, 2111-21 E. 33d St. and 3394-18 Brooklyn St.; cost \$105,000.

Mo., Kansas City.—O. Freeman will erect 2-story 6-apartment flat; cost \$12,000.

Okla., Tulsa.—Lida French will erect 2-story frame apartment-house; cost \$5000.

Tex., Houston.—C. Kavanaugh has plans by A. Delisle, 201 Levy Bldg., Houston, for apartment-house; 3 stories; 53x40 ft.; 24 rooms; pressed brick; pine floors; gravel roof; tile fireproofing; warm-air heat.

#### ASSOCIATION AND FRATERNAL

Tenn., Knoxville.—Y. W. C. A. has plans by Barber & McMurray, Knoxville, for previously-noted building; 3 stories, basement and sub-basement; Tennessee marble and brick; old Colonial style; 55x130 ft.; gravel roof; wood floors; low-pressure steam heat; accommodations for 75 beds; swimming pool 18x55 ft., sterilized by ultra-violet ray system; gymnasium, lockers, showers, etc., in basement; heating and mechanical apparatus in sub-basement; cost \$75,000. (See Machinery Wanted—Swimming-pool Equipment.)

#### BANK AND OFFICE

D. C., Washington.—Tom Moore, Prop. Moore's Strand Theater, 403 Ninth St. N. W., will erect 7-story fireproof office building on west side of 8th St., between D and E Sts., for storing moving-picture films, etc.; concrete and steel; cost \$100,000; completion by January.

Okla., Miami.—B. T. Hyner is reported to erect office building.

Fla., Clearwater.—People's Bank of Clearwater opened bids to remodel and enlarge building; adjoining store will be remodeled for offices; stucco exterior; completion by Nov. 1.

Tex., Lewisville.—First National Bank, B. L. Spencer, Pres., receives bids until July 30 to erect brick and tile bank building; plans and specifications at office T. J. Galbraith, Archt., Slaughter Bldg., Dallas. (Previously noted.)

#### CHURCHES

Fla., West Palm Beach.—Church of Christ will erect temporary structure; permanent building later. Address The Pastor.

Ga., Eastman.—First Baptist Church will erect building; cost \$15,000. Address The Pastor.

Ky., Louisville.—Congregation of Adath Jeshurun Temple, Simon Ades, Pres., will erect building to replace present structure; cost \$15,000 to \$20,000.

Miss. Crystal Springs.—Methodist Church is having plans prepared by Xavier A. Kramer, Magnolia, Miss., for building.

N. C., Elizabeth City.—First Methodist Church will erect building. Address The Pastor.

Okla., Durant.—Baptist Church will erect building; cost \$24,000. Address The Pastor.

Tenn., Knoxville.—Methodist Episcopal Church South will erect \$3000 addition. Address The Pastor.

Tex., Houston.—Tuam Avenue Baptist Church will erect \$50,000 structure; Greek style. Address The Pastor.

Tex., Lewisville.—Christian Church will erect brick building; J. E. Chambers, Chrmn. Com.

Tex., Vernon.—First Baptist Church will erect tabernacle; cost \$4000. Address The Pastor.

Va., Roanoke.—Belmont Methodist Episcopal Church will erect church and Sunday-school building; 80x130 ft.; 2 and 3 stories; 37 classrooms and 5 department assemblies; brick, stone and concrete; seating capacity 1500; cost \$50,000; steam heat, about \$4500; let contract for stone and concrete work to Grosso & Son, Roanoke; committee has supervision in charge and are taking bids on all work begun; Rev. J. H. Bathis, Pastor and Chrmn. Com.; H. L. Cain, Archt., 39 Merchants' National Bank Bldg., Richmond. (Lately noted.)

W. Va., Clarksburg.—Ash Chapel Methodist Episcopal Church, Rev. M. F. Pritchard, Pastor, has plans by Holmboe & Lafferty, Clarksburg, W. Va., for building; white brick; stone trim; tile roof; seating capacity; Sunday-school and church auditorium separated by rolling partitions; gymnasium in basement; dome in center supported by 4 pillars. (Previously noted.)

#### CITY AND COUNTY

Fla., Crestview.—Jail.—Okaloosa County opens bids August 14 for courthouse and jail. (See Courthouses.)

Mo., St. Louis.—Convention Hall.—City is having plans prepared by W. H. Gruen, Chemical Bldg., St. Louis, for convention hall; I. A. Hedges, Chrmn. Com. (Lately noted to vote Nov. 6 on \$2,000,000 bond issue.)

N. C., Greensboro.—Jail.—Guilford County Commrs. receive bids until August 21 to construct courthouse and jail. (See Court-houses.)

Okla., Cushing.—Bathhouse.—City Clerk receives bids until August 1 to erect bathhouse in Randlett Park; cost \$100,000.

Okla., Okmulgee.—Fire Stations.—City votes Aug. 7 on \$20,000 bonds to erect fire stations. Address The Mayor.

Okla., Shamrock.—City Hall and Jail.—City votes Aug. 4 on \$2500 bonds for city hall and jail, and additional \$3500 for equipment. Address The Mayor.

Okla., Stillwater.—Jail.—Payne County receives bids until August 1 to erect courthouse and jail. (See Courthouses.)

S. C., Laurens.—Jail.—Laurens County Commissioners are having plans prepared by Sumner & Hemphill, Greenwood, S. C., for jail; cost \$35,000; construction under supervision of Board of Commrs., B. B. Humbert, Chrmn. (Lately noted.)

S. C., Newberry.—Jail.—Newberry County Commrs. are having plans prepared by Sumner & Hemphill, Greenwood, S. C., for jail; cost \$50,000.

Tenn., Memphis.—Market and Auditorium. City votes July 28 on \$375,000 bonds each for market-house and auditorium; spur railroad track from market to platform for loading

refrigerator cars, etc.; construction under supervision of R. R. Ellis, W. C. Duttlinger, John T. Walsh and others, Commrs. (Lately noted to vote on \$375,000 bond issue.)

Tex., Beaumont.—Fair.—City votes Aug. 7 on \$100,000 fair bonds for South Texas State Fair. Address The Mayor.

Tex., Freeport.—City Hall, etc.—City will erect city hall, jail and fire station combined; 2 stories; probably brick. Address The Mayor.

#### COURTHOUSES

Fla., Crestview.—Okaloosa County is having plans prepared by S. J. Welch, Pensacola, Fla., and opens bids August 14 to erect courthouse and jail; approximately 61x114 ft.; brick and reinforced concrete; asbestos and asbestos shingle roof; vapor steam heat; Delco lighting system; cost \$25,000. (Lately noted.)

La., Winnfield.—Winn Parish Police Jury receives bids through W. L. Stevens, Archt., New Orleans, until Aug. 13 for courthouse to replace burned structure; 3 stories; fire-proof; concrete and tile floors; tile or slate roof; steam heat; electric wiring; cost \$70,000. (Previously noted.)

N. C., Greensboro.—Guilford County Commissioners, W. C. Boren, Chrmn., receive bids until August 21 for construction, heating, plumbing, elevator and jail equipment in connection with courthouse and jail building; drawings and specifications from Harry Barton, Archt., Greensboro; voted \$250,000. (Lately noted.)

Okla., Stillwater.—Payne County, W. T. Keys, Clerk, receives bids until August 1 to erect courthouse and jail; cost \$100,000. (Previously noted.)

#### DWELLINGS

D. C., Washington.—Chas. E. Wire has plans by Cloughton West, 217 Colorado Bldg., Washington, for 7 brick dwellings, 1419-31 Crittenden St. N. W.; cost \$28,000.

D. C., Washington.—S. E. Snyder, 2530 Q St. S. E., will erect 5 brick dwellings, 1653-63 U St. S. E.; cost \$10,000.

D. C., Washington.—J. O. Jecko, 1539 Meridian Place, N. W., has plans by A. E. Landvoigt, 1403 New York Ave., Washington, for hollow-tile residence, 3220 Patterson St. N. W.; cost \$6000; construction by owner.

Fla., Lakeland.—W. M. Lyle, Louisville, Ky., will erect residence.

Fla., Miami.—Samuel Stuessy will erect \$4000 residence.

Fla., Miami.—H. R. Duckwell, Indianapolis, Ind., is having plans prepared by August Geiger, Miami, for remodeling dwelling to include 1-story addition, sun parlors, breakfast porches and interior alterations; cost \$15,000.

Fla., Miami.—Carl Fisher is having plans prepared for alterations and addition to dwelling. (See Apartment-houses.)

Fla., St. Petersburg.—M. A. Goble will erect bungalow and garage on Second Ave.

Fla., St. Petersburg.—Geo. Heister, Camden, N. J., ill erect residences.

Fla., West Palm Beach.—W. T. Chestnut, Frederickton, N. B., Canada, is reported to erect dwelling in Royal Park.

Ga., Atlanta.—Wm. A. Fowler will erect 2-story frame dwelling; cost \$4100.

Ga., Atlanta.—Harrington Investment Co. will erect two 1-story frame dwellings; cost \$2500 each.

Ga., Atlanta.—Mrs. W. A. Graham will erect 1-story bungalow.

Ga., Savannah.—J. A. Justice, Fitzgerald, Ga., acquired 4000 acres and will develop; organize club to erect residence.

Ky., Lexington.—Davis & Wilkerson will erect 2-story 7-room brick and stucco residence; cost \$3000.

Md., Baltimore.—Otto Penske, 1427 Carswell St., will erect bungalow and outhouses at Summit Farms, Philadelphia Rd.

Miss., Askew.—Lew H. Askew will erect residence; stucco on frame construction; asphalt shingles; hot-air heat; plumbing; electric wiring; cost \$10,000; Raymond B. Spencer, Archt., 205-06 New Millsaps Bldg., Jackson, Miss.

Miss., Crystal Springs.—M. M. Todd is having plans prepared by Xavier A. Kramer, Magnolia, Miss., for residence.

Mo., Kansas City.—J. E. Enger will erect 1-story stucco and stone dwelling; cost \$4000.

N. C., Oak Ridge.—D. L. Donnell will erect bungalow; conservatory, porches, etc.

Okla., Oklahoma City.—W. W. Conners will erect two 1-story frame dwellings; cost \$3800.



on under  
ntling,  
(Lately  
)  
Aug. 7  
as State  
City will  
tion com-  
Address  
y is hav-  
h, Pensa-  
4 to erect  
ly 61x114  
; asbestos  
eam heat;  
(Lately  
)  
lice Jury  
as, Archt.,  
fourhouse  
ries; if fire  
or slate  
cost \$70.  
nty Com-  
receive  
ion, heat-  
equipment  
jail build-  
ing Harry  
d \$250,000.  
r, W. T.  
August 1  
at \$100,000.  
Wire has  
ado Bldg.,  
es, 1419-31  
er, 2530 Q  
ages, 1655-63  
1530 Meri-  
E. Land-  
ngton, for  
on St. N.  
wner.  
Louisville,  
will erect  
ianapolis,  
y August  
velling to  
rs, break-  
cost  
ing plans  
dition to  
oble will  
and Ave.  
ter, Cam-  
Chestnut,  
ported to  
will erect  
ment Co.  
ngs; cost  
ham will  
 Fitzgerald,  
velop; or-  
erson will  
ucco resi-  
Carswell  
houses at  
will erect  
struction;  
lumbing;  
mond B.  
aps Bldg.,  
Todd is  
Kramer,  
will erect  
cost \$400,  
will erect  
etc.  
nners will  
cost \$380.

Okla., Ponca City.—J. F. Denova will erect residence; cost \$6000.  
Okla., Tulsa.—G. N. Wright will erect 1-story frame residence; cost \$3000.  
Okla., Tulsa.—Harry M. Edinger will erect residence; 2 stories; frame; cost \$5500.  
Okla., Tulsa.—J. E. Devine will erect 1-story frame dwelling; cost \$5000.  
Okla., Tulsa.—L. E. Aaronson will erect dwelling; 2 stories; brick; cost \$30,000.  
Okla., Tulsa.—R. S. Ayers will erect 2-story addition to frame residence; cost \$4000.  
Tenn., Bearden.—L. R. Eager will erect \$10,000 dwelling near Bearden.  
Tenn., Covington.—Fred R. Fisher is having plans prepared by McGee & Lester, Memphis, for 8-room residence.  
Tenn., Knoxville.—W. H. McIntyre will erect frame dwelling; cost \$6000.  
Tenn., Nashville.—Turnley & Kirkpatrick will erect stone-veneer bungalow; cost \$5000.  
Tenn., Nashville.—W. C. Bilbro will rebuild stucco dwelling; cost \$7000.  
Tex., Dallas.—W. R. Lynch will erect 8-room 2-story frame dwelling; cost \$3250.  
Tex., Dallas.—C. B. Harris will erect addition to dwelling; cost \$3100.  
Tex., Dallas.—G. J. Van Winkle will erect 20-room 2-story brick and tile dwelling at 300-42 N. Marcellis St.; also repair structure at 613 E. 8th St. damaged by fire; cost \$8500.  
Tex., El Paso.—A. J. Fraser will erect \$3000 bungalow.  
Tex., El Paso.—H. M. Hervey will erect \$6000 residence.  
Tex., El Paso.—J. S. Curtiss will erect \$6000 residence.  
Tex., El Paso.—Lawlor & Morgan will erect 2 bungalows in East El Paso; cost \$5000.  
Tex., El Paso.—M. J. Cope will erect addition to dwelling at 904 N. Oregon St.; cost \$4000.  
Tex., Houston.—W. J. Taylor will erect five 5-room bungalows on Milby St.; hollow tile, stucco and plaster; metal shingle roof; double wood floors; electric lights; cost \$2400 each; plans and construction by owner. (Lately noted.)  
Va., Norfolk.—Ellen L. Runaldue will erect 2-story brick and 2-story frame dwelling; cost \$3000 and \$3000, respectively.  
Va., Norfolk.—W. B. Farant will erect 2-story brick residence; cost \$3000.  
Va., Richmond.—J. C. Woodfin will erect 4 frame dwellings; cost \$5000.  
Va., Roanoke.—N. V. Williams will erect 2-story brick-cased dwelling; cost \$4500.

**GOVERNMENT AND STATE**  
Ga., Macon.—Remount Station.—Quarter-master-General's Department Washington, D. C. selected 80-acre site near Swift Creek for remount station; Major James N. Hazelhurst, Supervising Engr.; Col. I. W. Littell, Washington, in general charge.  
S. C., Charleston.—Storehouse.—Bureau of Yards and Docks, Navy Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids August 6 to erect reinforced concrete general storehouse at navy-yard; concrete and timber pile foundation; basement and 4 stories; basement curtain walls concrete; other curtain walls brick; steel sash; electric wiring; elevators; spiral chute; 321x60.10 ft.; 46 ft. high; drawings and specifications (No. 2469) from commandant of navy-yard named and F. R. Harris, Chief of Bureau, Washington.  
Tex., Corsicana.—Home.—J. S. Calicut, Corsicana, receives bids until August 4 to erect administration building at State Orphans' Home; fireproof; cost \$100,000; plans and specifications at office C. H. Page & Bro., Archt., Austin, and H. O. Blanding, Corsicana. (Lately noted.)  
Va., Cape Henry.—Weather Bureau.—Secretary of Agriculture, Washington, D. C., rejected bids to construct 2-story and cellar cement and brick building for Weather Bureau, U. S. Department of Agriculture. (Lately noted.)

**HOSPITALS, SANITARIUMS, ETC.**  
Ark., Little Rock.—Hospital Board will select architect August 2 for city hospital; cost \$18,000; Wallace Townsend, Chrmn. Building Com. (Previously noted.)  
Ky., Paducah.—Illinois Central Ry., A. S. Baldwin, Chief Engr., Chicago, will rebuild hospital recently burned at loss of \$75,000; brick.  
Md., Baltimore.—Hahnemann General Hos-

pital, Mount St., near Riggs Ave., is having plans prepared for remodeling nurses' home.  
Tenn., Knoxville.—City will improve small-pox hospital; erect bathhouse and water tank; install pump, etc. Address The Mayor.  
Tex., Carlsbad.—State is having plans prepared by Sanguinet & Staats, American National Bank Bldg., Waco, for 6 buildings at tuberculosis sanitarium; cost \$105,000.  
Tex., Houston.—G. H. Herman Estate, T. J. Ewing, J. J. Settegast, Jr., and John S. Stewart, Trustees, has plans by Alfred C. Finn, Houston, and will soon call for bids to erect George H. Herman Charity Hospital; ultimate plans include 7 buildings, all to radiate from central structure or administration building which will be only structure erected at present; 3 stories and basement; accommodate about 82 ward patients and will have 18 private rooms and 2 wards for children; structures to be 160 ft. long; 6 other buildings will be erected as required to be connected with administration building by covered corridors; construct walks, driveways, etc. (Previously noted.)

**HOTELS**  
Fla., Daytona Beach.—Clarendon Hotel Co. will expend \$3000 for improvements to Clarendon cottage No. 4, \$5000 for improvements to power plant; also extend garage 150 ft., erect cottage, etc.  
Fla., Niceville.—R. E. L. McCaskill Co. purchased hotel and will erect addition of 20 to 30 rooms; will also erect number dwellings, etc.  
N. C., Smithfield.—W. Ranson Sanders acquired Smithfield Hotel and will remodel; plans include 30 rooms, 15 with private baths.  
S. C., Greenville.—J. B. Razor will convert office building under construction into hotel, theater and restaurant; 3 stories; 62x90 ft.; white pressed brick; hardwood floors; private bath in 60 per cent. of rooms; lavatory in all rooms; steam heat; restaurant 40x90 ft.; moving-picture theater 20x90 ft.; garage 60x90 ft.; brick; completion by Sept. 1; H. Olin Jones, Archt., Greenville. (Previously noted.)

**MISCELLANEOUS**  
Okla., Hugo.—Fair.—City will soon call election on \$15,000 bonds to purchase and equip grounds for Choctaw County fair. Address The Mayor.  
S. C., Greenville.—Restaurant.—J. B. Razor will convert office building under construction into hotel, restaurant and theater. (See Hotels.)  
Tenn., Knoxville.—Home.—Camp Home for Friendless Women will erect 36x15-ft. addition; 2 stories; laundry in ward on each floor; basement; hospital-room; cost \$7000.  
Tex., Fort Worth.—Clubhouse.—Perkins Dry Goods Co., Dallas, does not contemplate erection of clubhouse at Lake Worth as lately reported.

**RAILWAY STATIONS, SHEDS, ETC.**  
Ky., Paducah.—Illinois Central R. R., A. S. Baldwin, Ch. Engr., Chicago, will let contract Aug. 1 to erect 56-ft. addition to depot; extend sheds over tracks on either side; cost \$35,000.  
Miss., Greenwood.—Yazoo & Mississippi Valley Railroad Co. will erect passenger station; 42x160 ft.; concrete and brick; slate roof; tarrazzo tile floors; city electric lights; cost \$40,000; steam heat, \$5000; plans by D. F. McLaughlin of Illinois Central R. R., Chicago; bids opened July 17.  
N. C., Durham.—Durham Traction Co., J. F. Johnson, Jr., Engr., will reconstruct car barns on E. Main St.; cost \$7500, including machinery.  
Okla., Oklahoma City.—St. Louis and San Francisco Ry., F. G. Jonah, Chief Engr., St. Louis, will erect \$300,000 station. (Chicago, Rock Island & Pacific Ry. and St. Louis & San Francisco Ry. previously noted to erect union depot.)  
Okla., Picher.—Miami Mineral Belt R. R., W. Matthews, Chief Engr., Box 205, Miami, Okla., will erect station; frame; cost \$6000.  
Tex., Fort Worth.—Texas & Pacific Ry., C. H. Chamberlin, Chief Engr., Dallas, will erect terminal passenger station or remodel and enlarge present structure, construct undergrade crossing, etc.; steel, concrete and stone; reported cost \$90,000; to be operated by number of other railroads entering Fort Worth.

**SCHOOLS**  
Ala., Clanton.—Chilton County Commrs. will soon call election on tax for school improvements.  
Ala., Maysville.—Supt. S. R. Butler, Huntsville, Ala., will soon let contract to erect literary rural school building; frame; shingle roof; cost \$4500.  
Ark., Little Rock.—School Board, James Dorough, Prest., receives bids until August 6 to erect 2 frame schools in School District No. 19; plans and specifications at office John P. Almand, Room 1107 Boyle Bldg., Little Rock, after July 30.  
Fla., Gonzales.—County Board of Public Instruction rejected bids to erect principal's residence at J. M. Tate Agriculture High School; will have plans revised and call for new bids on 1-story building. Address A. S. Edwards. (Lately noted.)  
Fla., Midway.—Midway Sub-school Dist. Trustees, G. L. Dorman, J. V. Brown and W. L. Robinson, receive bids until Aug. 7 to erect addition to school; plans and specifications at office County Supt. of Public Instruction.  
Fla., Pensacola.—Board of Public Instruction is having plans prepared by Walker D. Willis, Pensacola, for improving tabernacle for high school; auditorium to seat 400; 16 classrooms; gas heat; cost about \$9000.  
Fla., Wimauma.—Hillsborough County Board of Public Instruction, J. E. Knight, Supt., Tampa, Fla., receives bids until Aug. 7 to erect 1-story frame school in Mayfield Special Tax Dist. No. 56, 6 ml. from Wimauma; plans and specifications at office Mr. Knight. (Lately noted.)  
Ga., Waycross.—Emerson Park School District voted \$5000 bonds to erect school. Address County Supt. of Education. (Lately noted.)  
Ky., Corbin.—School Board has plans by R. F. Graf & Sons, Knoxville, Tenn., for high school.  
Ky., Madisonville.—School Board has plans by R. F. Graf & Sons, Knoxville, Tenn., for high school.  
La., Denham Springs.—Livingston Parish School Board will erect school; 4 rooms; frame; heart cypress roof; pine floors; flues; cost \$3700; bids opened Aug. 1. Address Supt. John E. Cox.  
Miss., Cliftonville.—Board of Supervisors of Neshubee County, John A. Tyson, Clerk, Macon, Miss., is considering issuing \$3000 bonds to erect and equip school in Cliftonville Consolidated School District.  
Miss., Meridian.—Trustees Oakland Heights Separate School Dist., M. W. Stone, Secy., Meridian, receive bids until Aug. 6 for lumber to erect school; about 60,000 ft.; 60 window frames and sash; 18 doors; fireproof roofing; digging well and casing; 1 force pump; 1 water tank, not less than 1000 gals.; 1 gasoline engine, 2 1/2 H. P.; 1 drinking fountain and 2 hydrants, connections installed in building; 35,000 brick, delivered; paint outside and inside of building, 2 coats; 1 cesspool, 10x12 ft., lined; 2 toilets and water connections from tank to toilets and cesspool; 1 hot-air furnace installed to supply heat for 8 rooms, about 5000 cu. ft. each; 15 tons slack and nut mixed coal, delivered; erection by bonded contractor; plans call for 2 stories; frame; 6 rooms and auditorium; cost \$4500; completion on or before Oct. 1; plans and specifications at office T. C. Lockard, Supt. County School, Meridian. (Lately noted.)  
Miss., Pascagoula.—Wade Consolidated School Dist. will erect school; cost \$3000; architect not selected. Address Guy D. Dean, Pascagoula.  
Miss., Skene.—Agricultural High School Trustees have plans by N. W. Overstreet, Jackson, Miss., for agricultural high school; cost \$11,000; bids opened July 30.  
Miss., Sumner.—Sumner Separate School Dist. will erect building; ordinary construction; composition roof; steam heat; plumbing; electric wiring; cost \$30,000; plans ready about August 1; Raymond B. Spencer, Archt., 206-06 New Millsaps Bldg., Jackson, Miss.; Clarksdale office, Spencer & Abbott, Archts., 315 McWilliams Bldg.  
Mo., Columbia.—Stephens College will erect 65,000 dormitory; accommodate 75 girls; completion by fall.  
N. C., Booneville.—School Board will erect high school; 6 rooms and auditorium; brick; wood floors; composition roof; cost \$10,000; day labor under supervision D. H. Cooke, Mt. Airy, N. C.; A. T. Hase, Chrmn. School Board.  
N. C., Charlotte.—John B. Ross, Chrmn. Building Com., receives plans until Aug. 15

(extended date) to erect high and grammar school buildings; printed instructions on application. (Lately noted.)  
N. C., High Point.—Mr. Murphy, City Mgr., will receive bids to finish 4 rooms in north wing of Elm Street School, including flooring, plastering, wiring and heating.  
N. C., Vanceboro.—Craven County Farm Life School, W. L. Joslyn, Supt., will erect additional building.  
Okla., Filmore.—C. E. Enloe, Director of School Board of Consolidated School District No. 34, receives bids until July 31 for erection and completion of additions to 2-story concrete school; 40x80 ft.; composition roof; wood floors; plans and specifications at office J. B. White, Archt., Ardmore, Okla., and Mr. Enloe as above. (Previously noted.)  
Okla., Jenks.—Jenks School Dist. No. 27 is having plans prepared by Geo. Winkler, Tulsa, to erect school building; auditorium to seat 750; brick and concrete; gravel roof; flooring undetermined; steam heat; cement sidewalks; lighting not decided; cost \$17,000; will soon let contract for sewer, plumbing, heating and electrical work and also purchase heating plant for 2 school buildings and auditorium. Address C. W. Roush, Jenks. (Lately noted.)  
Okla., Mangum.—School Board of District No. 113 receives bids at office County Supt., Mangum, until August 1 to erect school; brick; 34x54 ft.; 2 stories; plans and specifications at office County Supt.; F. H. White, Clerk School Board, Reed, Okla.  
Okla., Nowata.—School Dist. No. 55 plans to erect school; reported cost \$3500. Address Dist. School Trustees.  
Okla., Nowata.—School Board, D. M. Lawson, Clerk, will erect high school and install heating, ventilating and plumbing system. (Previously noted.)  
S. C., Travellers Rest.—School Board states it will not erect school this year. (Lately noted.)  
Tenn., Altamont.—Grundy County will erect schools at Collins River, Flat Branch and Gap. Address County Commrs.  
Tenn., Chattanooga.—Board of Education abandoned, for present, plan to erect Wyatt High School; R. H. Hunt, Archt., James Bldg., Chattanooga. (Lately noted.)  
Tex., Arlington.—Grubbs Vocational School, Dr. W. B. Bizzell, Prest., lets contract about Sept. 1 to erect \$10,000 main building; also dairy barns and other buildings.  
Tex., Beaumont.—City will soon call for bids for installation of toilets, etc., in high school and Averill, Ogden, Fletcher and Millard ward schools; cost \$12,000. Address The Mayor.  
Tex., Cisco.—Cisco School Dist. voted \$10,000 building bonds. Address District School Trustees.  
Tex., Dallas.—School Board will expend \$12,000 to repair Fannin School damaged by fire.  
Tex., Denton.—J. H. Lowry, Prest. Board of Regents, College of Industrial Arts, receives bids until August 3 to erect 2-story and basement fireproof dormitory building, 1-story fireproof dairy barn, 1-story fireproof addition to laundry building and fireproof addition to power plant; also for plumbing, heating and wiring same; bids received for all or only one building; plans and specifications at office Fozzie E. Robertson, Archt., Southwestern Life Bldg., Dallas, Tex. (Lately noted.)  
Tex., Hamilton.—School Board will erect school; 2 stories; 85x49.6 ft.; stone walls; ordinary construction; tar and gravel roof; wood floors; jacketed heaters; electric lights; cost \$10,000; day labor under construction foreman; Roy E. Lane, Archt., Waco, Tex. Address Secy. of School Board.  
Tex., Quanah.—School Board has plans by C. H. Leinbach, 1135 Southwestern Bldg., Dallas, for 2-story and sub-story brick and concrete building; bids opened July 23; plans at office School Board and architect. (Previously noted.)  
Tex., Lubbock.—School Board has plans by Rose & Peterson, Barker Bldg., Kansas City, Kan., for school building; brick and frame; stone trim; cost about \$35,000; bids received by W. S. Posey, Secy. School Board, until July 25.  
Tex., Osceola.—School Board, Jim Hearne, Prest., receives bids until August 2 to erect 2-story brick school; plans and specifications at office J. O. Galbraith, Archt., Hillsboro, Tex.  
Tex., Stowell.—School Board is having plans prepared by F. W. Steinman, Beaumont, for 1-story \$10,000 school.

Va., Sewalls Point.—Board of Trustees, Tanners Creek District, B. F. Cartwright, Clerk, receives separate bids until July 30 for painting and general repairs to schools at Sewalls Point, Titus Town and Ocean View; general repairs only to Larchmont, Oakwood, La Fayette High, Ballentine and East Brambleton schools; plans and specifications at office James Hurst, Division Supt., 55 Chamberlain Bldg., 146 Granby St., Norfolk.

Va., Ocean View.—See Va., Sewalls Point.

W. Va., Institute.—West Virginia College Institute will rebuild Dawson Hall to replace burned structure.

W. Va., Keyser.—State Board of Control, Charleston, W. Va., is having plans prepared by Paul A. Davis, 1713 Sansome St., Philadelphia, for building to replace burned building of preparatory branch of University of West Virginia; about \$120,000 available. (Previously noted.)

W. Va., Moundsville.—Board of Education, Moundsville Independent School Dist., will open bids August 4 to erect 2 schools; one for graded school at 3d St. and Cedar Ave.; fireproof; 2 stories and basement; 16 classrooms; other for high school and junior high school at Tomlinson and 3d St.; fireproof; 20 classrooms, auditorium, domestic science and manual training departments; composition roof; reinforced concrete beam floor construction; steam heat; city lights; Edwin Bates Franzheim, Archt., Wheeling. (Previously noted to have voted \$168,000 bonds to acquire site, erect and equip schools.)

W. Va., Clarksburg.—Board of Education, Clarksburg School Dist., W. H. Taylor, Pres., 431 Empire Bank Bldg., receives bids until July 28 to erect Vocational School; plans and specifications at office Board of Education, and Holmboe & Lafferty, Archts., Clarksburg.

### STORES

Ark., Conway.—Newbern Bros. will erect addition to building; brick; 20x35 ft.

Fla., Miami.—H. G. Ralston contemplates erecting store building; cost \$10,000.

Fla., New Smyrna.—L. H. Elias will erect store building; 75x100 ft.

Fla., St. Augustine.—John T. Dismukes has plans by Fred A. Henderich, St. Augustine, for 3 stores; 18x60 ft.; 12-in. brick walls; tin roof; cement floors; electric lights; cost \$4500; construction by day labor with superintendent; F. A. Henderich, Archt., St. Augustine. (Lately noted.)

Ky., Lexington.—Byron McClelland Estate, T. B. Satterwhite, representative, is reported to erect store building for Smith-Watkins-Darnaby Co. to replace burned structure; 3 stories and basement; brick and stone. (Lately noted.)

La., Jennings.—H. R. Proctor and W. J. Little have plans by F. W. Steilman, Beaumont, Tex., for brick business building; 60x150 ft.; cost \$10,000.

Mo., Kansas City.—Mrs. J. Morgan will erect 1-story business building; cost \$3000.

Mo., Kansas City.—J. T. Bird will erect 2-story brick and concrete business building; cost \$30,000.

Mo., Kansas City.—J. D. Welsh will erect 2-story brick and concrete business building; cost \$30,000.

Mo., Kansas City.—James Flanagan, Sr., has plans by Smith, Rea & Lovitt, Kansas City, for 2-story structure; basement and sub-basement; cost \$75,000; foundation to permit erecting 20-story building later; site 80x60 ft. (Lately noted.)

Mo., St. Louis.—Wacopa Real Estate & Investment Co. will erect 2-story business building; 102.4x185.4 ft.; cost, including site, \$60,000.

N. C., Winston-Salem.—J. D. Murphy will erect 2-story brick store; cost \$7500; construction under supervision of O. C. Perryman.

Okla., Cheyenne.—Mrs. Jennie Berry will erect brick business building.

Okla., Lawton.—J. Connor will erect building to replace lately-burned structure.

Okla., Tar River.—S. Kenoyer will erect 2-story brick and concrete business building; 50x120 ft.

Okla., Tulsa.—W. T. Brown Paint & Wall Paper Co. will remodel business building lately noted damaged by fire at loss of about \$10,000.

Okla., Tulsa.—Commerce Building Co., 4th and Main St., will erect store; 4 stories; 43x140 ft.; brick, steel and reinforced concrete; cost \$75,000; Rush, Endicott & Rush, Archts., 226 Unity Bldg., Tulsa.

Tenn., Nashville.—Bransford Realty Co. will construct stone foundation to building at 125-27-29 Eighth Ave., North; cost \$3500.

Tenn., Nashville.—Joy Floral Co. will expend \$3000 for alteration to building at 601 Church St.

Tex., Dallas.—R. H. Stuart will remodel front of building at 1402 Main St.; cost \$3000.

Tex., San Antonio.—R. W. Hamilton will erect store building on South Flores St.; cost \$3000.

Tex., San Antonio.—Owners of Oppenheimer building will rebuild structure damaged by fire at loss of \$200,000.

Tex., Sour Lake.—Cash Grocery Co. will erect brick store building.

Tex., Stamford.—H. H. Pennington will erect 1-story brick store; 100x150 ft.

Va., Tappahannock.—G. N. Anderton is receiving bids to erect store building to replace burned structure lately noted; 100x40 ft.; 1 story; 12-ft. pitch; brick or concrete; iron or tin shingle roof; concrete or wood floors; concrete sidewalks; plans to erect 5 other buildings later. (See Machinery Wanted—Building Materials; Roofing; Brick; Metal Ceiling.)

## BUILDING CONTRACTS AWARDED

### APARTMENT-HOUSES

Va., Richmond.—J. Lee Davis has plans by and let contract to Davis Bros., Inc., 2510 W. Main St., Richmond, to erect York apartment-house; slag roof; hot-water heat; reported cost \$18,000.

### BANK AND OFFICE

Ga., Macon.—Macon Gas Co. let contract to David Shaw, Macon, to remodel office building; plans include addition for gas and electric specialties and enlargement of offices on 2d floor; tile and reinforced concrete; cost \$12,000; completion in 90 days; Curran R. Ellis, Archt., Macon.

### CHURCHES

Ala., Gadsden.—First Methodist Episcopal Church South Bldg. Com., Dr. E. H. Cross, Chrmn., let contract to W. H. Mayben, Gadsden, to erect Sunday-school annex; 2 buildings, 69x48 ft. and 47x69 ft., separated by court; red-faced brick; slate roof; white stone trim; 2 stories; classrooms for primary, junior and adult departments; vapor heat (contract let); sanitary drinking fountains; cost \$25,000; J. T. Brodie, Archt., Birmingham. (Lately noted.)

Ga., Valdosta.—First Methodist Church let contract to J. W. Lanier, Valdosta, to erect Sunday-school addition; 25x90 ft.; brick and stucco; metal roof; cement basement floor; other floors, wood; addition to steam plant; electric lights; cost \$10,000; excavation begun; Lloyd Greer, Archt., Valdosta. (Lately noted.)

La., Lake Charles.—Presbyterian Church let contract to erect building; 40x100 ft.; brick; composition roof; frame floors; gas-steam heat; cost \$25,000; Favrot & Lavaud, Archts., New Orleans. (Lately noted.)

Okla., Anadarko.—First Methodist Episcopal Church let contract to A. M. Van Orden, Anadarko, to erect lately noted building; 64x70 ft.; brick; tile roof; wood floors; steam or furnace heat; electric lights; cost about \$20,000; S. S. Volt, Archt., Wichita, Kan. Address L. L. Brannon, Anadarko. (See Machinery Wanted—Heating.)

Okla., Walter.—Methodist Church let contract to Mr. Turnbaugh to erect \$15,000 building.

Tenn., Knoxville.—Fifth Avenue Presbyterian Church let contract to Worsham Bros., Knoxville, to erect addition to Sunday-school chapel; frame and brick; metal roof; pine floors; cost \$3000; vacuum cleaning plant, \$400; A. B. Baumann, Archt., Knoxville. (Lately noted.)

Tex., Sour Lake.—Sour Lake Baptist Church, Rev. A. E. Hill, pastor, let contract to Denning & Lofland, Sour Lake, to erect building; 55x98 ft.; frame; shingle roof; wood floors; stoves; city lighting; cost \$6000; M. L. Waller & Co., Archts., Fort Worth. (Lately noted.)

W. Va., Beckley.—First Baptist Church let contract to J. O. Freeman, Beckley, to erect building exclusive of plumbing and heating; auditorium to seat 300; 6 classrooms and lecture-room; 45x72 ft.; brick; slate roof; con-

### THEATRES

Ga., Atlanta.—Marcus Loew, New York, will erect theater building; E. A. Schiller, local manager.

Okla., Tulsa.—Dr. C. W. McCarty will erect 2-story brick and reinforced concrete moving-picture theater; cost \$40,000.

S. C., Greenville.—J. B. Rasor will convert office building under construction into hotel, theater and restaurant. (See Hotels.)

### WAREHOUSES

Ga., Eastman.—Eastman Canning Co. will erect potato warehouse; capacity 10,000 bu.

Ky., Louisville.—Warehouse Architectural & Engineering Co., Detroit, Mich., indefinitely postponed erection of terminal warehouse previously noted.

Miss., Meridian.—Sturges & Co. will probably erect warehouse to replace structure lately burned at loss of \$10,000.

Mo., Kansas City.—Wyoming Realty Co. will erect 6-story brick and concrete warehouse; cost \$98,000.

S. C., Greenwood.—W. J. Sneed Lumber Co. will enlarge warehouse and office building, making same 3 stories and 60 ft. longer; brick. (See Machinery Wanted—Elevator.)

crete floor in basement, other floors oak; hot-water heat; electric lights; cost \$30,000; J. B. Martin, Archt., East Liverpool, Ohio. Address contractor. (Lately noted.)

Va., Lexington.—Baptist Church let contract to Champe & Loyal, Lexington, to erect church and Sunday-school building; 61x128 ft.; 2 stories; 22 classrooms; 5 department assemblies; brick, stone and concrete; cost \$25,000; steam heat, \$2300; construction begun; Wade Masters, Chrmn. Building Com.; H. L. Cain, Archt., 39 Merchants National Bank Bldg., Richmond.

### CITY AND COUNTY

Tex., Orange.—Warehouse.—City let contract to Austin Bros., Dallas, at \$24,000 to erect dock warehouse; 300x60 ft.; steel frame. (Lately noted.)

Tex., Houston.—Warehouses.—American Construction Co., Houston, general contractor to erect municipal warehouse, let following sub-contracts: Cement, Texas Portland Cement Co.; sheet metal, Blumenthal Bros.; painting, S. P. Colter; thorp doors, L. G. Hester; structural steel, Houston Structural Steel Co.; electric wiring, Barden Electric Co.; glass and glazing, Texas Glass & Paint Co.; plumbing, Warren Co.; hardware, Peden Iron & Steel Co.; all of Houston; reinforcing, Geo. W. Armstrong Co., Fort Worth; steel rolling doors, Gilbert Mfg. Co., Dallas; art metal doors, Zahner Metal Sash & Door Co., Canton, Ohio; Almetal doors, Merchant & Evans Co., Philadelphia; steel sash, American Steel Window Co., Chicago; plans by E. E. Sands, City Engr., call for structure 425x700 ft.; concrete; composition roof; concrete floors; electric lights; cost \$300,000. (Previously noted.)

### COURTHOUSES

S. C., Saluda.—Saluda County let contract at \$49,000 to J. W. Stout & Co., Sanford, N. C., to erect courthouse; slate roof; Georgia-Carolina No. 1 buff face brick; stone columns, entrances and trimmings; fireproof vaults; vault doors and windows; tile floors, corridors and toilet roofs; plain and ornamental plastering; sackett board and metal lath; hollow tile and brick partitions; hardwood floors; conduit electrical work; steam heat; plumbing; opera chairs; wood and steel office furniture and equipment; C. Gadsden Sayre, Archt., Anderson, S. C. (Lately noted.)

### DWELLINGS

Ala., Girard.—Muscoogee Mfg. Co. let contract to Butts Lumber Co., Columbus, Ga., to erect 4 bungalows; cost \$4000.

D. C., Washington.—Irwin & Shanks let contract to L. D. Hays, 4601 Deane Ave. N. E., Washington, to erect 5 frame dwellings on Eads St. between 47th and 49th Sts.; cost \$14,200; C. E. Webb Archt., 821 12th St. N. W., Washington.

Fla., Palm Beach.—A. D. Johnston, Bessemer, Mich., let contract to H. B. and H. R. Corvin, West Palm Beach, to erect residence; 53x60 ft.; stucco and frame; tile built-up asphalt roof; wood floors; fireplace;

electric lights; cost \$3000; O. J. Williams, Archt., West Palm Beach. (Lately noted.)

Ga., Port Wentworth.—Port Wentworth Terminal Corporation, Savannah, Ga., let contracts to erect dwellings, etc., in connection with industrial city development. (See Schools.)

Ga., Atlanta.—Mrs. M. J. Everett let contract to J. S. & C. R. Collins, 714 Empire Bldg., Atlanta, to erect 8-room bungalow; brick veneer; composition shingle roof; hardwood floors cost \$6000; hot-air heat \$250. (Lately noted.)

Ga., Augusta.—B. S. Dunbar let contract to H. S. Sikes, Augusta, to erect residence; 2 stories; brick; asphalt shingles; hardwood floors; furnace heat; 2 baths; sleeping porches; cost \$8000; Bleckley & Irvin, Archts., King Bldg., Augusta. (Lately noted.)

Ga., Augusta.—Miss Gladys Hickman let contract to C. B. Holley, Augusta, to erect \$3400 bungalow.

La., Alexandria.—Herman J. Duncan let contract to Gehr Construction Co., Inc., Alexandria, to erect residence; 36x68 ft.; frame exterior; plastered interior; creosote-dipped shingle roof; wood floors; cost \$4000; hot-air heat about \$500; plans by owner.

Md., Baltimore.—Grosoup Company, St. Paul and 26th Sts., has plans by and let contract to L. Schoenlein, Jr., 21 Gunther Bldg., Baltimore, to erect 11 dwellings on Liberty Heights Ave. and Grantly St.; 22x36 ft.; 2 stories; brick; Carey or similar roofing, and Spanish tile mansard; wood floors; vapor heat; electric lights; cement sidewalks; cost \$30,000. Address contractor. (Lately noted.)

Okla., Oklahoma City.—Robt. L. Watson let contract to C. W. Van Vacter, Oklahoma City, to erect dwelling at 1412 W. 9th St.; 2 stories; 26x28 ft.; frame; shingle roof; wood floors; cost \$3750. (Lately noted.)

S. C., Camden.—W. M. Shannon let contract to J. H. Moore, Camden, for improvements to residence, to include roof, gutters, plumbing, installation of steam heat and repainting; also to erect number tenements and other improvements on farm 5 mi. from Camden.

S. C., Camden.—S. W. Van Landingham let contract to J. Henry Moore, Camden, to erect 5-room bungalow cottage; construction begins Aug. 1.

S. C., York.—Thos. F. McDow let contract to J. R. Logan, York, to erect brick residence; Edwards & Sayward, Archts., Atlanta.

Tenn., Memphis.—W. D. Kyser let contract to J. W. Williamson, Memphis, to erect \$18,000 residence; Chas. O. Pfeil, Archt., Memphis.

Tex., El Paso.—Robt. Lander, 1830 Texas St., has plans by and let contract to J. C. McElroy to erect residence lately noted; 35x34 ft.; brick stuccoed; built-up asphalt-felt roof topped with crushed slate; quartered oak and tile floors; furnace; city lighting; cost \$9000. Address owner. (See Machinery Wanted—Electrical Fixtures.)

Tex., Gonzales.—J. M. Murphy let contract to F. Musenheider to erect previously-noted residence; 34x38 ft.; brick; tile roof; oak and tile floors; electric lights; cost \$15,000; Adams & Adams, Archts., San Antonio. (See Machinery Wanted—Heating; Filtering System.)

W. Va., Wilbur.—McGonehay & Co., Logan, W. Va., has plans by and let contract to J. W. Fisher, Logan, to erect 35 residences for miners; 2, 3 and 4 rooms; wood; 5-ply composition roof; wood floors; open fires; electric lights; 2-room structures to cost \$500, 3-room \$750, and 4-room \$950. (Lately noted.)

### GOVERNMENT AND STATE

Ala., Anniston.—Camp.—Quartermaster-General's Department, Washington, D. C., let contract to John O. Chisholm & Co., New Orleans, to construct National Guard camp; accommodate 35,000 men and 10,000 mules; tents; install water and sewerage works; erect wooden kitchens, mess halls, hospitals, storehouses, etc.; 3,500,000 ft. of lumber, 18 mi. of cast-iron pipe and 12 mi. service pipe required; completion probably by August 15; Morris Knowles, Supervising Engr.; Craven & Lang, Associate Contrs.; Col. I. W. Littell, Washington, in general charge. (Lately noted.)

Ala., Montgomery.—Camp.—Quartermaster-General's Department, Washington, D. C., let contract to Algernon Blair, Montgomery, to construct National Guard camp; accommodate 35,000 men and 100,000 mules; tents; install water and sewerage works; erect



wooden kitchens, mess halls, hospitals, storehouses, etc.; Col. I. W. Littell, Washington, in general charge. (Lately noted.)

Ala., Jasper.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., let contract to Algernon Blair, Montgomery, Ala., to erect postoffice; cost about \$30,000; limestone. (Lately noted.)

Fla., St. Augustine.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., let contract at \$7481 to G. K. & E. M. Williams, Ocala, Fla., for repairs to postoffice; completion in 120 days. (Previously noted.)

La., Alexandria.—Camp.—Quartermaster-General's Department, Washington, D. C., let contract Stewart-McGehee Construction Co., Little Rock, Ark., to construct National Guard camp; accommodate 35,000 men and 10,000 mules; tents; install water and sewerage works; erect wooden kitchens, mess halls, hospitals, storehouses, etc. Col. I. W. Littell, Washington, in general charge. (Lately noted.)

Miss., Hattiesburg.—Camp.—Quartermaster-General's Department, Washington, D. C., let contract to T. S. Mundy & Co., Chattanooga, to construct National Guard camp to be known as Camp Shelby; accommodate 35,000 men and 10,000 mules; tents; install water and sewerage works; erect wooden kitchens, mess halls, hospitals, storehouses, etc.; Pechman & Pechman, Chattanooga, have contract for plumbing, sewerage and water supply at cost of about \$100,000; Col. I. W. Littell, Washington, in general charge. (Lately noted.)

N. C., Charlotte.—Camp.—Quartermaster-General's Dept., Washington, D. C., let contract to Consolidated Engineering Co., Calvert Bldg., Baltimore, Md., to construct National Guard camp; accommodation for 25,000 to 30,000 men; erect frame sleeping and eating quarters, recreation roofs, administration buildings, kitchens, construct baths and sewers, install water-works, lighting system, etc.; cost \$2,500,000 to \$3,000,000; completion in 3 months; A. Collins, Charlotte, has contract for 20,000,000 ft. North Carolina pine lumber. (Lately noted.)

Okla., Fort SMI.—Camp.—Quartermaster-General's Department, Washington, D. C., let contract to Selden-Breck Construction Co., Fullerton Bldg., St. Louis, to construct National Guard camp, to be known as Camp Doniphan; accommodate 35,000 men and 10,000 mules; tents; install water and sewerage works; erect wooden kitchens, mess halls, hospitals, storehouses, etc.; Col. I. W. Littell, Washington, in general charge. (Lately noted.)

Okla., Oklahoma City.—Capitol.—Board of Affairs let contract at \$79,988 to Oklahoma Pink Granite Co. for granite for State capitol under construction. (Previously noted.)

Tex., Fort Worth.—Camps.—Quartermaster-General's Department, Washington, D. C., let contract to J. W. Thompson and Hughes-O'Rourke Construction Co., Dallas, to construct National Guard camp; accommodate 35,000 men and 10,000 mules; tents; install water and sewerage works; erect wooden kitchens, mess halls, hospitals, storehouses, etc.; Col. I. W. Littell, Washington, in general charge. (Lately noted.)

Tex., Houston.—Camp.—Quartermaster-General's Department, Washington, D. C., let contract to American Construction Co., Houston, for frame work at National Guard camp; accommodate 35,000 men and 10,000 mules; tents; install water and sewerage works; erect wooden kitchens, mess halls (about 250), hospitals, storehouses, etc.; 4,300,000 ft. yellow pine lumber required; Col. I. W. Littell, Washington, in general charge. (Lately noted.)

Tex., San Antonio.—Cantonment.—Quartermaster-General's Dept., Washington, let contract at about \$500,000 to Wallace Plumbing Co., Dallas, to install plumbing and fixtures at Cantonment at Camp Wilson, for which Stone & Webster, 120 Broadway, New York, have general contracts. (Lately detailed.)

Tex., Waco.—Camp.—Quartermaster-General's Department, Washington, D. C., let contract to Fred A. Jones Construction Co., Dallas, to construct National Guard Camp; accommodate 35,000 men and 10,000 mules; tents; install water and sewerage works; erect wooden kitchens, mess halls, hospitals, storehouses, etc.; Col. I. W. Littell, Washington, in general charge. (Lately noted.)

Va., Norfolk.—Cantonment.—Navy Dept., Washington, D. C., let contract to Kral Construction Co., Chicago and Houston, to erect 100 buildings for army cantonment at Jamestown Exposition Grounds, several miles from Norfolk; cost about \$1,000,000. (Other contracts lately noted.)

## HOSPITALS, SANITARIUMS, ETC.

N. C., Roanoke Rapids.—Roanoke Rapids, Inc., let contract to T. C. Thompson & Bros., Charlotte, to erect hospital; plans by Herbert W. Simpson, 309-10 Board of Trade Bldg., Norfolk, Va., call for 2 stories and basement; 47x136 ft.; brick; ordinary construction; terra-cotta tile and gravel roof; wood floors; vacuum heat; push-button elevator; cost \$300,000, including equipment. (Lately noted.)

Tenn., Memphis.—Baptist Memorial Hospital let contract to James Alexander Construction Co., Memphis, to erect addition to building; 8 stories; brick, terra-cotta and reinforced concrete; also additional story to present 7-story structure for solarium; cost about \$200,000; Chas. O. Pfeil, Archt., Memphis. (Lately noted.)

## HOTELS

Ga., Port Wentworth.—Port Wentworth Terminal Corporation, Savannah, Ga., let contract to erect hotels in connection with industrial city development. (See Schools.)

N. C., Greensboro.—J. L. Crouse, Greensboro, general contractor to erect O. Henry Hotel, let following sub-contracts in addition to those previously noted: Painting, W. R. Golden; marble and tile, McClamrock Marble Co.; both of Greensboro; kalamini work, Reliance Fireproof Door Co., New York; ornamental iron, Stoller & Cook; plans by W. L. Stoddard, 9 E. 40th St., New York, call for reinforced concrete structure with Dixie brick veneer; tar and slag roof; flat tile and concrete floors; electric wiring and elevators; cost \$435,000. (Lately noted.)

Okla., Ardmore.—Ardmore Hotel Co., Charles Von Weise, Pres., let contract to Geo. H. Siedehoff Construction Co., Kansas City, Mo., to erect hotel, and to Geo. W. Stiles Construction Co., Chicago, for excavation and foundation; 6 stories and basement; 100x100 ft.; fireproof; cost \$200,000; Wight & Wight, Archts., Kansas City, Mo. (Lately noted.)

Okla., Miami.—W. L. Williams let contract to erect store and hotel building. (See Stores.)

## MISCELLANEOUS

Ark., Piggott.—Clubhouse.—J. U. Class of Presbyterian Church has plans by and let contract to E. E. Porterfield, Piggott, to erect clubhouse; 30x40 ft.; construction of plain lumber, logs, etc.; shingle roof. Address E. C. Lindsey, Piggott. (Lately noted.)

## RAILWAY STATIONS, SHEDS, ETC.

Ga., Oglethorpe.—Southern Ry. System, B. Herman, Chief Engr. M. W. & S. Lines East, Charlotte, N. C., let contract to Louis C. Kalb, Atlanta, to erect station at Oglethorpe University; granite covered with variegated slate. (Previously noted.)

La., Crowley.—St. Louis & San Francisco Ry., F. G. Jonah, Ch. Engr., St. Louis, let contract to H. J. Andrews to erect warehouse.

## SCHOOLS

Ark., Winchester.—Directors of Winchester Special School Dist. let contract to erect brick high school; cost \$6000.

D. C., Washington.—American Methodist University let contract to William H. McCray, 539 Bond Bldg., Washington, to erect laboratory building Massachusetts and Nebraska Aves.; cost \$8500; plans by Bureau of Mines, Interior Dept., Washington.

Fla., Arch Creek.—Board of Public Instruction, R. E. Hall, Supt., Miami, let contract to W. P. Brion, Arch Creek, to erect school building; cost \$13,000. (Lately noted.)

Fla., Jacksonville.—Board of Public Instruction let contract at \$26,000 to C. P. Woodcock, Jacksonville, to erect school; 175x140 ft.; brick; built-up roof; wood floors; electric lights; heating \$4000; Rutledge Holmes, Archt., Jacksonville. (Lately noted.)

Fla., Jacksonville.—Board of Public Instruction Duval County, F. A. Hathaway, Supt., let contract at \$56,421 to Southern Construction Co., Jacksonville, to erect school at Johnson Addition, La Villa Park; plans by Mark & Shefall, Jacksonville, call for 10 rooms; auditorium; manual training and domestic science rooms, office, library, etc.; 2 stories; 182-ft. front; wing to rear 100 ft.; another wing 75 ft.; brick bearing walls; reinforced concrete floors; tile roof; steam heat; plumbing and heating to be let later; W. B. Ittner, St. Louis, Consult. Archt. for Board. (Lately noted.)

Ga., Port Wentworth.—Port Wentworth Terminal Corporation, Savannah, Ga., Jas. Imbrie, Pres., 61 Broadway, New York, states details have been decided for development of industrial city; will expend \$333,000 for dwellings to include 3, 5, 6 and 8-room dwellings in white village, and 250 2-room bungalows in negro section; schools, stores, churches, moving-picture theaters, hotels, including 2 hotels for transients, etc.; Terry & Trench, Contra. Grand Central Terminal; Chas. Wellford Levitt, Engr., 230 Broadway; Bloodgood Tuttle, Supervising Archt.; Wm. Lauretzen, Building Archt. (Lately noted.)

La., New Orleans.—H. Sophie Newcomb Memorial College let contract to Geo. J. Glover, New Orleans, to erect college buildings, including residences, art and administration buildings; reinforced concrete construction; brick bearing walls; cost \$800,000; James Gamble Rogers, Archt., 470 Fourth Ave., New York; construction begun. (Lately noted.)

La., New Orleans.—Tulane Educational Fund let contract to Geo. J. Glover, 1022 Whitney Bldg., New Orleans, to erect college buildings, including residences, art and administration buildings for H. Sophie Newcomb Memorial College; reinforced concrete construction; brick bearing walls; Ludwick-Celadon roofing tile; reinforced concrete floors; Warren-Webster heating system; city lighting; electric elevators; buildings 3 stories and basement; 71x250 ft., 250x140 ft. and 20x68 ft.; cost \$850,000, including mechanical equipment; James Gamble Rogers, Archt., 470 Fourth Ave., New York; construction begun. (Lately noted.)

Miss., Gulfport.—Gulf Coast Military Academy let contract to erect 2 brick additions to school for mess hall and kitchen; N. W. Overstreet, Archt., Jackson, Miss. (Lately noted.)

N. C., Black Mountain.—Board of Education of Buncombe County, Asheville, N. C., let contract \$28,529.42 to J. L. Taylor to erect school; 10 classrooms; auditorium to seat 700; 2 stories and basement; also let contract at \$2500 to L. F. Waldrop, Rock Hill, S. C., for heating; ordinary construction; composition roof; hardwood floors; steam heat; electric wiring; cost \$35,000, including equipment; Chas. C. Hook, Archt., Charlotte, N. C. (Lately noted.)

N. C., Charlotte.—School Board let contract to erect addition to school at Biddleville; will soon let contract for Fairview school.

N. C., Mineral Springs.—Mineral Springs School District Trustees let contract to J. H. Grubbs, Winston-Salem, N. C., to erect school; brick and stone; cost \$15,000. (Previously noted.)

Okla., Checotah.—Board of Education let contract to Manhattan Construction Co., Muskogee, Okla., to erect school; brick and stone; tar and gravel roof; wood floors; cost \$23,000; 1-pipe gravity return system of heat \$4700; H. O. Valeur & Co., Archts., Muskogee. (Lately noted.)

Okla., Colbert.—Board of Education let contract to Manhattan Construction Co., Muskogee, Okla., to erect reinforced concrete and brick school; Jewell Hicks, Archt., Durant, Okla. (Previously noted.)

Okla., Miami.—W. L. McWilliams let contract to John Shor, Miami, to erect store and hotel building; 190x120 ft.; brick; gravel roof; concrete and wood floors; gas heat; electric lights; concrete sidewalks; cost \$15,000; J. C. Roberts, Archt., Miami. (Lately noted.)

Okla., Texola.—Trustees let contract to Shaw & Bennett, Beaver, Okla., to erect school; brick; cost \$10,700.

Tenn., Memphis.—J. E. Hollingsworth & Co., Memphis, general contractors at \$122,887 to erect Rozelle School, let following sub-contracts: John Kastner, cut stone; Lon Tisdale, wiring and plumbing; Fischer Heating Co., heating; all of Memphis; Eagle Iron Works, St. Louis, structural steel; plans by Jones & Furbinger, Memphis, call for 3 stories; red brick; terra-cotta trim; fireproof; 2-story auditorium to seat 450; gravity ventilating system, firetowers, etc. (Previously noted.)

Tex., Waxahachie.—School Board let contract at \$4197 to W. J. Moore, Waxahachie, to erect 2-room addition to school; also following contracts for equipment: W. C. Hixson, laboratory and drawing-room equipment, \$2843.06; Union School Furnishing Co., Chicago, miscellaneous furniture, \$1805; C. A. Bryant Co., desks and window shades, \$2024.80; C. H. Page & Bro., Archts., Austin. (Lately noted.)

## STORES

D. C., Washington.—D. J. Kaufman let contract to Jas. L. Parsons, Jr., Munsey Bldg., Washington, to remodel store, 1007-09 D St. N. W.; cost \$3500; Julius Wenig, Archt., 721 10th St., Washington.

Fla., Tampa.—W. Lesley Brown let contract to Bates-Hudnall-Jetton Co., Tampa, to erect 3-story reinforced concrete building to be occupied by American Supply Co.; 105x63 ft.; foundation to permit erection of 3 additional stories later; cost \$30,000. (Lately noted.)

Ga., Port Wentworth.—Port Wentworth Terminal Corp., Savannah, Ga., let contract to erect stores in connection with development of industrial city. (See Schools.)

La., New Orleans.—A. M. & J. Solari, Ltd., leased building at 916-18 Canal St. and will expend \$10,000 to remodel and install fixtures for store; new front; 24x120 ft.; Harry Moses, Contr., New Orleans.

Md., Thurmond.—C. H. Osler let contract to G. C. Weddell, Thurmond, to erect store building to replace structure lately noted damaged by fire; 70x63 ft.; brick and frame; tin roof; wood floors; cost \$4000. Address owner.

Miss., Bovina.—Trustees of Agricultural High Schools let contract to D. Mayer, Jackson, Miss., to erect Teachers' homes in connection with Bovina and Oak Ridge Consolidated Schools and Jefferson Davis Academy; cost \$6000. (Lately noted.)

N. C., Wilmington.—I. Shrier let contract to Kelly W. Jewel, Wilmington, to erect store building; brick and frame; cost \$9000; B. H. Stephens & Co., Archts., Wilmington. Address contractor.

Okla., Ponca City.—L. A. Cann let contract to remodel building on E. Grand Ave.

S. C., Greenville.—Owner of Mallard Bldg. let contract to Gallivan Building Co., Greenville, to remodel building; cost \$3000. (Lately noted under Greenville, N. C.)

Va., Lynchburg.—Hudson-Morgan Electric Co. let contract to Smoot & Sheehan, Lynchburg, to remodel building.

W. Va., Mannington.—A. K. Modl has plans by and let contract to J. F. Adamson, Mannington, to erect department store; 21.6x103 ft.; concrete foundation; reinforced floor in front; tile walls; front of Galtite limestone and pressed brick with Mosaic tile panels; Barrett specification gravel roof; wood and reinforced concrete floors with tile top; natural gas heat; city electric lights; electric pushbutton elevator; cost about \$16,000.

## THEATERS

Ga., Port Wentworth.—Port Wentworth Terminal Corp., Savannah, Ga., let contract to erect moving-picture theater in connection with development of industrial city. (See Schools.)

La., New Orleans.—Boehringer Amusement Co., Inc., 512 Audubon Bldg., has plans by and let contract to Fromherz & Brennan, New Orleans, to erect Liberty Theater; 50x170 ft.; steel and concrete; composition roof; concrete floor construction with cork or interlocking rubber tile; steam heat; electric lights from local plant.

Tex., Corsicana.—M. L. Levine let contract to J. E. Metcalf, Box 122, Corsicana, to erect addition to building for opera-house, moving-picture theater and roof garden; 61x59 ft.; fireproof; reinforced concrete floor construction; cost \$35,000; M. T. Horne, Archt., Corsicana. (Lately noted.)

## WAREHOUSES

D. C., Washington.—F. W. Bolgiano has plans by Milburn-Heister Co., 6th floor, Union Savings Bank Bldg., and let contract to R. P. Whitty Co., 412 Union Trust Bldg., both of Washington, to erect warehouse 125x21 C St. N. W.; cost \$30,000.

Ga., Lagrange.—Cotton Exchange Co. let contract to West Point Iron Works, West Point, Ga., to erect Farmers' Warehouse; brick; tar and gravel roof; standard mill construction floors; cost \$20,000; elevator \$1000; Q. R. Nolan, Archt., Lagrange. (Lately noted.)

Ky., Falmouth.—Burley Tobacco Co., Falmouth, J. S. Baskett, Mgr., Boyd, Ky., let contract to Jas. Smith, Falmouth, to erect warehouse; 25x180 ft.; wood; composition roof; wood floors; electric lights; cost \$35,000; W. P. Humphrey, Archt., Cynthiana, Ky. Address Mr. Baskett as above. (Lately noted.)

N. C., Greensboro.—E. P. Wharton, T. H. Matthews and S. H. Isler let contract to

Mr. Sewell, to erect bonded warehouse; 26x136 ft.; brick and wood; composition roof; concrete floors; skylights; cost \$18,000. Address Consolidated Storage Warehouse Co., Box 429, Greensboro. (Lately noted.)

Tenn., Knoxville.—R. L. Harris will erect warehouse; concrete; 50x150 ft.; 1 story; asphalt roof; concrete floors; cost \$4000; W. H. Drane, Contr., Knoxville.

Tex., Houston.—American Construction Co., Houston, general contractor to erect municipal warehouse, let sub-contracts. (See City and County.)

Tex., Whitesboro.—A. J. Brooks will erect grain warehouse; 32x100 ft.; pressed brick; concrete floors; glass front; let contract for brick and concrete work to H. J. Brooks & Son, Whitesboro.

principal bicycle parts, with smaller parts in proportion; same as to motor cycles.

**Dyeing Machinery.**—See Bleaching, Dyeing and Finishing (Knitting Mill) Machinery.—J. E. Latham Co.

**Earthwork.**—Ellis County Levee Improvement Dist. No. 8, O. W. Finley, Engr., Ennis, Tex.—Bids until August 7 to construct 280,000 cu. yds. earthwork on Onion Creek; work suitable for small drag-line machine; plans and specifications from Engr.

**Electrical Fixtures.**—Robt. Lander, 1839 Texas St., El Paso, Tex.—Prices on electrical fixtures for \$900 residence.

**Electric-light Plant.**—Bureau Yards and Docks, Navy Dept., Washington, D. C.—Bids until July 30 for electric-lighting system for structural shop at navy-yard, New York; drawings and specification (No. 2470) on application to Bureau or to commandant of navy-yard.

**Elevator.**—W. J. Sneed Lumber Co., Greenwood, S. C.—Second-hand freight elevator; hand power; 1 to 2000-lbs. capacity.

**Enamels, etc.**—Stevens & Co., Gl. Kongevj 19, Copenhagen, Denmark.—To represent manufacturers of fancy colors for automobiles for baking and air drying; black cycle enamel for baking, first coat and finishing, in barrels and tins; snow white finishing enamel, in gallons and tins; floor varnish in gallons and tins; body, flattening and general carriage varnishes; wagon varnishes in gallons and tins.

**Enamelling and Japanning.**—See Metal Stampings, etc.—Maxon-Miller Jack Co.

**Engine (Oil).**—Southern Machine Ex-

**Food Products.**—Zerbini & Angeletto, 41 Midan St., Alexandria, Egypt.—To represent manufacturers of food products.

**Fruit-evaporating Machinery.**—A. Erskine Miller, Staunton, Va.—Addresses of manufacturers of fruit-evaporating machinery.

**Gasoline Plant.**—Gypsy Queen Oil & Gas Co., 311 Campbell Bldg., Oklahoma City, Okla.—Casing-head gasoline plant.

**Generator.**—Whitley-Elkhorn Coal Co., Sergeant, Ky.—100 K. W. generator.

**Generator.**—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Jobbers' prices, for quick delivery, on second-hand or rebuilt 35 K. W. generator, and to be used and driven by a generator; 2 or more 10 H. P. motors; must be equipped to furnish two-hundred 16 C. P. lights and drive motors, when desired, at the same time.

**Glass Bottles.**—H. G. Williamson, Munsey Trust Bldg., Baltimore, Md.—Second-hand 5-gal. glass bottles.

**Hardware.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Adzes; brad awls; axes; bits; benders; miter boxes; braces; compasses; drills; edges; gimlets; groovers; hatchets; levels; plumbs; mallets; nail pullers; punches; calipers; screw drivers; hand saws; steel tapes, etc.; Schedule 1344; various other tools, hardware, etc.; Schedules 1358, 1359, 1345, 1361, 1349, 1346, 1357, 1348, etc.

**Heating.**—J. M. Murphy, Gonzales, Tex.—Prices on heating for \$15,000 residence.

**Heating.**—L. L. Brannon, Anadarko, Okla.—Prices on steam-heating equipment, including boiler and radiators; also furnace-heating equipment for \$30,000 church building.

**Hoisting Drum.**—Mayking Coal Co., Mayking, Ky.—Hoisting drum and wire rope.

**Iron and Steel Products.**—G. Mukerji & Co., 98 Clive St., Calcutta, India.—To represent manufacturers of iron and steel products for markets of India; contemplate shipments by way of Pacific coast, minimizing freight charges and war risks; specifications of hoop iron, steel plates, galvanized pipes, wrought-iron gas pipe, nuts, bolts, galvanized corrugated iron sheets, plain sheets, galvanized wire, wire netting, etc., on file in office of Manufacturers Record.

**Kilns.**—C. D. T. Adkinson, Crichton, Ala. Correspond with manufacturers of rotary kilns for burning chalk into lime; or with firms designing and equipping plants for lime companies.

**Lock Manufacturers.**—D. B. Morrison Co., Morriston, Fla.—To correspond relative to manufacture of patented manifold locks for automobiles.

**Machine Tools.**—Irwin-Harrison & Crossfield, Inc., 90 Wall St., New York.—To represent manufacturers of milling, slotting, planing, drilling, boring and brass finishers' machines; shapers; crucibles; ball bearings; for Australian demands.

**Manufacturers.**—Joti Parshad Rangli Lull & Co., Delhi, India.—To represent American manufacturers, especially of piece goods and sundries.

**Mechanical Novelties.**—See Toys, etc.—Telmo Vivas.

**Metal Ceiling.**—See Building Material.—G. N. Anderton.

**Metal Stampings, etc.**—Maxon-Miller Jack Co., 625 6th Ave., Huntington, W. Va.—Prices on small pressed steel bells, clock wheels, clock springs, and other light metal stampings up to 1 lb.; strip and sheet soft steel; Japanning and enameling; will need quantities.

**Mining Machinery.**—Whitley-Elkhorn Coal Co., Sergeant, Ky.—Electric coal-cutting machinery; 2 breast machines; 100 K. W. generator; 1500 ft. 2-0 wire.

**Motor (Electric).**—Southern Machine Exchange, Somerset, Ky.—50 H. P., A. C., 220-volt electric motor.

**Motor.**—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Dealers' spot cash prices, for quick delivery, on 75 H. P. D. C. motor; first-class condition; quick delivery.

**Oil Refinery.**—Traders' Oil & Refining Co., 405 Baltimore Bldg., Oklahoma City, Okla.—Equipment for oil refinery; 100 H. P. boiler, steam-still, tanks, pumps, etc.

**Oil Mill Equipment.**—L. Hirsch & Sons, 265 Greene St., New York.—Data and prices on machinery to refine crude cottonseed oil.

**Oil Refinery.**—Zerbini & Angeletto, 41 Midan St., Alexandria, Egypt.—Machinery to improve system of olive-oil plant at Mytilene, Greece.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

### "WANTS"

**Agricultural Equipment.**—Fabre & Gonin, 65 Rue Thomas, Marseilles, France.—To represent manufacturers of tractors, plows, cultivators, threshing machines, etc.

**Barrels.**—Cleano Mfg. Co., Tryon, N. C.—Molasses or whiskey barrels.

**Bells and Clock Wheels, etc.**—See Metal Stampings, etc.—Maxon-Miller Jack Co.

**Bleaching, Dyeing and Finishing (Knitting Mill) Machinery.**—J. E. Latham Co., Greensboro, N. C.—Prices on bleaching, dyeing and finishing machinery for knitting mill.

**Boiler.**—McCanne-King Engineering Co., 416 R. Bldg., El Paso, Tex.—54x14 horizontal tubular boiler for 125 lbs. working pressure; standard specifications; Hartford inspection and insurance; shell to be in 2 sheets only, without dome; heads 7-16 and shell 5-16, with two manholes; complete trimmings, including full flush front set shaking grates; send specifications on nearest to foregoing that can be furnished within 60 days and best price delivered in El Paso; no smokestack, but quote separately on breeching and smoke pipe about 16 ft. long to connect with flue or stack of power-house; to ship (with boiler) balance of carload of black pipe for steam-heating work in sizes 1 to 3 in.

**Boiler.**—Henry Potts & Co., 650 Real Estate Trust Bldg., Philadelphia, Pa.—50 H. P. vertical boiler; A-No. 1 condition; 110-lbs. working pressure.

**Boiler.**—Four States Lumber Co., L. W. Krouse, Prest.-Mgr., Texarkana, Tex.—100 H. P. boiler; second-hand; good condition.

**Boiler.**—Traders' Oil & Refining Co., 405 Baltimore Bldg., Oklahoma City, Okla.—100 H. P. boiler. (See Oil Refinery.)

**Boiler.**—Office Commrs. District of Columbia, Room 509 District Bldg., Washington, D. C.—Bids until Aug. 6 to furnish boiler, locomotive type; specifications and proposal forms obtainable from Purchasing Officer, D. C., Room 320 District Bldg., Washington.

**Boilers.**—D. L. Casey Machine Co., Springfield, O.—Two 100 H. P. tubular boilers for heating purposes.

**Boilers.**—Jonesville Lumber & Veneer Co., A. W. Stewart, Prest., Jonesville, La.—Prices on two 72x18 or 72x16-in. second-hand boilers.

**Bottling Machinery.**—E. M. Miller, care of Columbia Laundry, 1323 Taylor St., Columbia, S. C.—Names and addresses of manufacturers of bottling machinery.

**Brick.**—See Building Material.—G. N. Anderton.

**Brick Machinery.**—See Oil Mill Machinery.—M. G. Haradas.

**Building Material.**—Carolina Belle Coal Co., F. E. Young, Mgr., Clarksburg, W. Va.—Prices on building material for plant at Worthington, W. Va.

**Building Materials.**—G. N. Anderton, Tappanhook, Va.—Prices on brick, cement, plate glass, metal ceiling and siding, galvanized roofing, tin shingles; for store building.

**Car.**—W. W. Weaver, Durham Sun, Durham, N. C.—Light car, such as linemen and section men use on railways.

**Cars.**—Mayking Coal Co., Mayking, Ky.—1 and 2-ton coal cars.

**Cement.**—Irwin-Harrison & Crossfield, Inc., 90 Wall St., New York.—Agency of cement manufacturer for trade in India.

**Chemicals.**—Zerbini & Angeletto, 41 Midan St., Alexandria, Egypt.—To represent manufacturers of chemicals.

**Cigarette Machinery, etc.**—Fernandez & Canas, Zambrano, Bolivar, Colombia.—Small machine, costing about \$30, for making cigarettes; small cinegraph, costing \$30 to \$40, for family exhibitions.

**Cinematograph Machine.**—See Cigarette Machinery, etc.—Fernandez & Canas.

**Concentrating Mill.**—Triangle Mines Co., John D. Bomford, Mgr., Miami, Okla.—Prices on mill machinery and power plant equipment for lead and zinc mines; probably use oil engines.

## FOR THE BENEFIT OF

ENGINEERS ARCHITECTS MACHINERY DEALERS  
CONTRACTORS BANKERS MANUFACTURERS and OTHERS

Who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

## THE DAILY BULLETIN

is issued every business day in the year

The construction news as published in the Daily Bulletin is invaluable to all business people who want to keep in daily touch with the organization of business enterprises of all kinds throughout the whole South. Unlimited possibilities for the creation of business, for securing contract work, for the sale of machinery and supplies of all kinds for bond buyers and others, are to be found through a close following up of the news in the Daily Bulletin.

The subscription price is \$25.00 a year. Are you a subscriber to it, or an advertiser in it? If not, you are missing an opportunity for profitable business.

The Daily Bulletin is an exceptionally desirable advertising medium.

ADDRESS: MANUFACTURERS RECORD, BALTIMORE, MD.

**Concrete Block Machinery.**—Burnett Bag & Burlap Co., Brooklyn, Baltimore, Md.—Correspondence with manufacturers of concrete block machinery, forms and molds.

**Corn Mills.**—S. A. Scott, West Point, Miss.—Second-hand corn shelling, cleaning and sacking outfit; light capacity; give full description.

**Cranes.**—Bureau Yards and Docks, Navy Dept., Washington, D. C.—Bids until July 23 for 40-ton bridge crane and 15-ton bridge crane, in extension to machine shop at navy-yard, Mare Island, Cal.; drawings and specification (No. 2443) upon application to Bureau or to commandant of navy-yard.

**Crane (Traveling).**—G. E. Bennett, 120 Liberty St., New York.—Motor-driven traveling crane, 5-ton capacity, span 40 to 50 ft., 110 volt, 3 motors.

**Crusher.**—J. W. Lewis, Crandall, Tenn.—10-ton capacity grinder for agricultural limestone.

**Cycles, etc.**—A. Speidel, 16 Boul Georges-Favon, Geneva, Switzerland.—Cycles and cycle supplies of all kinds; for bicycles and motorcycles; lots of 100, 250 or 500 for

change, Somerset, Ky.—50 H. P. oil or kerosene engine.

**Engines (Oil).**—See Concentrating Mill.—Triangle Mines Co.

**Engines.**—Jonesville Lumber & Veneer Co., A. W. Stewart, Prest., Jonesville, La.—Prices on two 14x18, 14x16 or 13x18-in. second-hand engine.

**Excelsior Machinery.**—L. Hirsch & Sons, 265 Greene St., New York.—Data and prices on machinery for manufacturing excelsior.

**Filtering System.**—J. M. Murphy, Gonzales, Tex.—Prices on filtering system for \$15,000 residence.

**Finishing Machinery.**—See Bleaching, Dyeing and Finishing Machinery.—J. E. Latham Co.

**Fishing Rod Supplies.**—L. Shaw Andre, Norfolk, Va.—Large quantities cork handles and other trimmings for fishing rods.

**Flour Mills.**—J. D. Wyrick, Bearden, Tenn.—Prices on bolting cloth for flour mill; bolting machinery with cloth installed; wheat cleaning machines.



netto, \$4  
represent  
Erskine  
of manu-  
chinery.  
il & Gas  
ma City  
Coal Co.,  
308 W.  
Jobbers  
4-hand or  
be used  
more 10  
to furnish  
the motors,  
Munsey  
ond-hand  
Supplies  
—Adzes;  
er boxes;  
gimlets;  
bs; mal-  
s; screw  
; Sched-  
ars, etc.;  
1346, 1357,  
s, Tex.—  
ence.  
nadarko,  
quipment,  
furnace-  
build-  
Co., May-  
e rope.  
ukerji &  
To repre-  
eel prod-  
emplate  
tel, mini-  
r risks;  
l plates,  
as pipe,  
red iron  
ire, wire  
Manufac-  
ton, Ala.  
f rotary  
or with  
ants for  
ison Co.,  
relative  
locks for  
& Cros-  
To repre-  
slotting,  
finishers'  
bearings;  
ngli Lull  
American  
oods and  
ys, etc.—  
erial.—G.  
ller Jack  
—Prices  
x wheels,  
al stamp-  
ft steel;  
ed quan-  
orn Coal  
ting ma-  
W. gen-  
hine Ex-  
C., 230-  
W. Jack-  
ers' spot  
75 H. P.  
n; quick  
Refining  
ma City,  
100 H.  
s, etc.  
& Sons,  
and prices  
ottonseed  
netto, \$4  
achinery  
plant at  
ed.

**Office Supplies.**—See Toys, etc.—Telmo Vivas.

**Oil-mill Machinery, etc.**—M. G. Haradas, Argon, Akala, Berar, India.—Catalogues of complete oil-mill machinery for hourly capacity 100 quarters; sugar manufacturing equipment; rice-hulling machinery; equipment to manufacture colors from raw material; paper manufacturing machinery; match-making equipment; brick and terracotta machinery; stationery; cheap jewelry; novelties.

**Ovens (Coke).**—Carolina Belle Coal Co., F. E. Young, Mgr., Clarksburg, W. Va.—Prices on coke ovens.

**Paving.**—City of Richmond, Va., Chas. E. Bolling, City Engr.—Bids until July 27 to grade and pave alleys, grade streets and place vitrified brick gutters; proposal forms on application.

**Paving.**—W. M. Bacon, Member City Council, Henderson, N. C.—Correspondence relative to contemplated street paving.

**Paving, etc.**—Clay County Commrs., Ashland, Ala.—Bids until July 28 for following: 300 sq. yds. concrete pavement; 130 lin. ft. curb and gutter, 3 catch basins, 200 cu. yds. back fill and 300 ft. 18-in. double strength vitrified pipe; plans and specifications obtainable from Probate Judge; W. P. Moon, County Engr., Ashland.

**Paving.**—Board of Aldermen, Friars Point, Miss.—Bids until August 7 to construct 120,000 sq. ft. concrete sidewalks; plans and specifications on file with Mayor and obtainable from City Engr.; M. Y. Scott, City Clerk.

**Paving.**—City Commrs., Fort Worth, Tex.—Bids until July 31 to grade and gravel East Fourth St., from Harding St. to East Fourth St. Bridge, and Harding St., from East Third to East Fourth St.; 3000 cu. yds. gravel; 7000 cu. yds. excavation; proposal forms, specifications and plans obtainable from F. J. Von Zuben, City Engr.; C. W. Wiggins, Street Commr.

**Paving.**—City of West Point, Ga.—Bids until August 7 for paving improvements with either concrete, vitrified brick, sheet asphalt or patented pavements; 4000 cu. yds. excavation; 10,500 lin. ft. granite or concrete curbing; 4000 sq. yds. sheet cement sidewalks; 3200 sq. yds. sheet pavement; storm-water sewers; plans, etc., at office L. Strong, City Clerk; copies obtainable from Knox T. Thomas, Consit. Engr., 502 Forsyth Bldg., Atlanta, Ga.

**Paving.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until August 1 to grade, curb and pave Woodberry Ave., from Plumlee Circle to Green Spring Ave.; 4900 sq. yds. cement concrete paving, 3700 sq. yds. sheet asphalt paving, 400 cu. yds. grading and 4000 lin. ft. combination concrete curb and gutter; Contract No. 155-A; specifications obtainable from Commrs. for Opening Streets, John H. Robinette, Prest., City Hall, where plans and profiles are on file.

**Paving.**—City of Gadsden, Ala., office of City Clerk, City Hall.—Bids to construct 600 sq. yds. asphaltic concrete paving on 5-in. concrete base, 2300 ft. curb and gutter, including driveway, etc., and 900 ft. storm sewers; plans and specifications on file with Ernest Smith, City Engr., City Hall; bids opened July 23.

**Pipe.**—Columbus Pierce, Box 1043, Memphis, Tenn.—1500 ft. 8-in. cast-iron pipe with fittings, tees and elbows.

**Piping.**—Drexel Oil & Gas Co., H. P. White, Pawhuska, Okla.—2 or 3 carloads casing.

**Piping.**—Gypsy Queen Oil & Gas Co., 311 Campbell Bldg., Oklahoma City, Okla.—5% and 6¼-in. casing.

**Piping.**—McCann-King Engineering Co., 66 E. R. Bldg., El Paso, Tex.—Black pipe; 1 to 3 in.; suitable for steam heating.

**Planer.**—C. T. Sowden, Mobile, Ala.—6x12 or 16-in. high-speed four-side planer.

**Power Plant Equipment.**—See Concentrating Mill.—Triangle Mines Co.

**Pumping Plant.**—Directors Cameron County Irrigation District No. 1, Harlingen, Tex.—Bids until August 6 for engine and pumping plant complete with foundations and auxiliaries, ready for operation; capacity 35,000 to 60,000 gals. per min.; maximum lift of 22 ft.; plans and specifications on file in office at Harlingen.

**Pumping Plants.**—Drexel Oil & Gas Co., H. P. White, Pawhuska, Okla.—1 or 2 oil-pumping power plants.

**Pumping Plant.**—City of Winchester, Ark., C. A. Myers, Mayor.—Pumps and engine for 100 gals. water per minute.

**Rails.**—Mayking Coal Co., Mayking, Ky.—10 to 40-lb. rails.

**Rice Machinery.**—See Oil Mill Machinery, etc.—M. G. Haradas.

**Rails.**—Carolina Belle Coal Co., F. E. Young, Mgr., Goff Bldg., Clarksburg, W. Va.—Prices on 16-20-lb. rails.

**Road Construction.**—Bay County Commissioners, Panama City, Fla.—Bids until July 30 for 103 mi. road construction. E. V. Camp, Consit. Engr., Atlanta, Ga.

**Road Construction.**—Hardin County Highway Com., J. E. Holland, Chrmn., Savannah, Tenn.—Bids until August 16 to construct 40 mi. gravel roads; for survey and profile address F. M. Patton, Engr., Savannah.

**Road Construction.**—Montgomery County Commrs., John B. Lewis, Prest., Rockville, Md.—Bids until Aug. 7 to construct section State-aid highway upon or along street connecting Norbeck State Rd. with Frederick and Darnestown Rds. at town limits of Rockville; 21,000 sq. yds. concrete for 1½ mi.; plans can be seen and forms of specification and contract obtained from State Roads Com., 601 Garrett Bldg., Baltimore, for \$1.

**Road Construction.**—Prairie County Road Improvement Dist. No. 3, W. H. Wheeler, Prest., De Vall Bluff, Ark.—Bids until August 6 to construct 2½ mi. macadam road; 4420 cu. yds. embankment, 86 cu. yds. concrete, 4066 tons crushed rock; bids to be made on blank forms furnished by District.

**Road Construction.**—Ceell County Commissioners, P. M. Groves, Clerk, Elkton, Md.—Bids until Aug. 3 to construct 1½ mi. State-aid highway upon or along Telegraph Rd. from top of eastern Big Elk Hill to Delaware State line; plans can be seen and forms of specifications and contract obtained for \$1 from State Roads Commission, 601 Garrett Bldg., Baltimore, Md.

**Road Construction.**—Road Commrs. Sunflower County Dist. No. 5, Ruleville, Miss.—Bids until August 17 to construct 25 mi. gravel road; plans and specifications on file with John W. Johnson, Chancery Clerk; copies obtainable from H. S. Stansel, Engr., Ruleville, for \$2.50.

**Rolls (Crushing).**—A. Kurtz, 19th and Buttonwood Sts., Philadelphia, Pa.—Several crushing rolls, sizes 20x10-in. to 36x16-in.

**Rolling Mills.**—J. B. van Heijst & Zonen, Gravenhage, Holland.—Data, estimates and drawings for rolling mill to reduce steel sheets of 3 to 5 mm. into sheets of ½ to 3 mm. to 1000 mm. wide.

**Roofing.**—See Building Material.—G. N. Anderson.

**Scraper Outfit.**—Box 236, Mullens, W. Va. To rent for 3 months 10-team wheeled scraper outfit complete, with foreman, to do force account work; \$6 per day for teams, 10 hours. Wire or write.

**Sugar Machinery.**—See Oil Mill Machinery.—M. G. Haradas.

**Swimming-pool Equipment.**—Barber & McMurry, Bank & Trust Bldg., Knoxville, Tenn.—Prices on mechanical equipment in connection with swimming pool for \$75,000 Y. W. C. A. building.

**Tank.**—South Georgia Milling Co., Valdosta, Ga.—Second-hand molasses-storage tank; 800 to 2500 gals.

**Tank and Tower.**—Columbus Pierce, Box 1043, Memphis, Tenn.—Second-hand material;

steel tank, hemispherical bottom, heater attachment, 50,000 gal. -or more capacity; steel lattice tower, 50 ft. high or higher; second-hand.

**Tanks.**—Soc. An. per l'Industria del Riscaldamento, via Stelvio, 102 A, Milan, Italy. Data on complete setting of machines for construction of steel recipients for milk transport; made in 1 piece with triple lining; capacities 5, 10, 15, 20, 25, 30, 40 and 50 liters.

**Tanks.**—Harvey Co., 113 South St., Baltimore, Md.—Storage tanks for fuel oil; 10,000-gal. capacity.

**Textile.**—See Manufacturers.—Joti Parshad Rangli Lull & Co.

**Toys, etc.**—Telmo Vivas, Popayan, Cauca, Colombia, S. A.—To represent manufacturers of: "Rubber balls with whistles;" toys; mechanical novelties; optical and scientific goods; stationery; paper; office supplies.

**Tractor (Caterpillar).**—Maryland Equipment & Supply Co., Equitable Bldg., Baltimore, Md.—Gasoline caterpillar tractor; 20 to 40 H. P.

**Water-works Construction.**—City Commissioners, J. M. Haynes, Secy., City Hall, Lawton, Okla.—Bids until July 29 to construct water pipe line from dam at Lake Lawtonka to Lawton, 12 mi.; pipe to be delivered to Fort Hill and Lawton, on track; contractor to do unloading and hauling; plans, profiles and specifications on file with Mr. Hayes.

**Water-works.**—Board Trustees, Clyde Cady, City Clerk, Red Rock, Okla.—Bids until August 13 on water-works system, including sinking open caisson well, constructing pump-house and installing 250 G. P. M., 200-ft. head triplex pump, geared 25 H. P. oil engine, 30,000-gal., 115-ft. high elevated tank, 7500 ft. mains, etc.; plans and specifications obtainable from Benham Engineering Co., Colcord Bldg., Oklahoma City.

**Water-works Construction.**—City Commissioners, W. E. Conger, City Clerk, Ada, Okla.—Bids until August 1 to construct reinforced concrete flume, 35-in. diam., about 400 ft. long, and 500,000-gal. 110-ft. high elevated tank; alternate bids on the tank for both reinforced concrete and steel; also bids received to furnish f. o. b. cars Ada, 5000 ft. 4-in. Class B and 5000 ft. 12-in. Class B cast-iron pipe, 5 tons special castings, and 10 fire hydrants; plans and specifications obtainable from Benham Engineering Co., Consit. Engr., Colcord Bldg., Oklahoma City, for \$2.

**Wire.**—Whitley-Elkhorn Coal Co., Sargent, Ky.—1500 ft. 2-0 wire.

**Wire Rope.**—Mayking Coal Co., Mayking, Ky.—Wire rope and hoisting drum.

**Wire Rope.**—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Dealer's price on 2000 ft. ¾-in. first-class second-hand wire rope.

**Woodworking Machinery.**—Western Carolina Engineering & Realty Co., Andrews, N. C.—Addresses of manufacturers of spoke, handle, insulator pin and shuttle block machinery.

**Woodworking Machinery.**—See Oil Mill Machinery.—M. G. Haradas.

Tenn., Collinwood.—Tennessee Valley Iron & Railroad Co. will build 45-mi. line from Collinwood to Savannah, Tenn.; also 15 mi. from Collinwood to Wayne Furnace, Tenn. This is extension of the line now in operation from Iron City to Collinwood. F. W. Reed, Collinwood, is Chief Engr.

Tex., Fort Worth.—Texas & Pacific Ry. is building connection and other tracks for Camp Bowie, near Tremble, 3 mi. from Fort Worth. About 3 mi. of tracks are already constructed. E. F. Mitchell, Dallas, Tex., is Chief Engr.

Tex., Newton.—Bids are being invited by R. W. Wier, Houston, Tex., for the construction of 14 mi. of railroad from Newton northeast. Until July 28, contract and specifications may be had of W. G. Massenberg, Snell Hotel, Newton, Tex.

Tex., San Antonio.—San Antonio Public Service Co. is building electric railway extension to South San Antonio and Camp Kelly, the army aviation post. Other inter-urban extensions are to be made. W. B. Tuttle is V.-P.

W. Va., Blacksville.—Blacksville & Western Railway Co. of Morgantown, W. Va., is chartered with \$25,000 capital to build and operate a line from Blacksville, W. Va., to Brave, Pa., about 5 mi. Incorporators: Raymond E. Kerr, Chas. A. Goodwin, Ammon I. Derr, C. S. Bailey and David E. Adams, all of Morgantown.

## FINANCIAL NEWS

### FINANCIAL CORPORATIONS

Ark., Hlytheville.—The Hlytheville Investment Co., capital \$10,000, is incptd. by W. W. Hollipeter, Prest.; E. M. Terry, Secy.; W. O. Anthony, Treas.

Fla., Leesburg.—First National Bank of Leesburg, a conversion of the Citizens' Bank, is chartered; capital \$25,000.

Ga., Baxley.—Baxley State Bank has made application for charter; capital \$25,000. Petitioners: I. I. Moody of Bunnell, Fla., W. A. McWilliams, St. Augustine, Fla., and J. C. Dean, Baxley.

La., Thibodaux.—National Bank of Thibodaux is being organized by Dr. A. J. Price, W. D. Beraud, Louis H. Beraud, Dr. L. E. Meyer and C. A. Fricke.

Mo., Kansas City.—National City Bank chartered; capital \$1,500,000.

N. C., Madison.—Farmers' Bank & Trust Co., capital \$50,000, is organized by W. B. Webster, W. T. Ledbetter, W. T. Lauten and James Wall.

N. C., Wilmington.—American Banking Co., authorized capital \$10,000, is incptd. by George T. Johnson, J. E. Boyland and Clyde Padgett.

S. C., Lamar.—Lamar National Bank, to succeed the People's Bank of Lamar, has made application for charter; capital \$25,000.

Tex., Dayton.—People's Guaranty State Bank is authorized to do business; capital \$10,000; J. F. Elder, Jr., Prest.; R. S. Gillespie, Cash.

Tex., Gouldbusk.—First State Bank is chartered, capital \$10,000. C. F. Dumas, Prest.; M. H. Crockett, V.-P., and J. Y. Simmons, Cashier. Business is to begin about August 15.

Tex., Hansford.—Guaranty State Bank incptd., capital \$25,000; W. S. McNabb, Prest.; B. V. Andrews, V.-P., and Walter C. Sikes, Cash. Business is to begin July 10.

Tex., Seguin.—Farmers' State Bank, capital \$25,000, has begun business. Rudolph Tschepke, Prest.; Max Starcke, active V.-P. and Cashier; Dr. N. A. Poth, V.-P.

### NEW SECURITIES

Ala., Bessemer.—(Floating Indebtedness).—Bill is to be introduced in the City Council authorizing the issuing of \$75,000 of bonds to pay off floating debt. B. C. Jones is Mayor.

Ala., Dadeville.—(Funding).—\$245,000 of 5 per cent. 30-year Tallapoosa County have been purchased at par by Sidney Spitzer & Co., Toledo, Ohio.

Ala., Gadsden.—(Street).—\$16,000 of 6 per cent. 10-year \$500 denomination bonds have been purchased at 101½ by Well, Roth & Co., Cincinnati.

Ala., Enterprise.—(Refunding Light and Water).—\$22,000 of 6 per cent. 10-year \$1000 denomination bonds have been purchased at par by Steiner Bros., Birmingham, Ala.

## RAILROAD CONSTRUCTION

### RAILWAYS

Ala., Florence.—Muscle Shoals Traction Co. is the new name of the company which Thurston H. Allen of Florence and others have formed to build the proposed inter-urban railway from Florence, via Athens, to Huntsville, Ala., 64 mi., with a branch to Lexington, Ala., about 12 mi. Mr. Allen is Gen. Mgr. and Secy. Other officers are Solon L. Whitten of Chicago, Prest., and Tracy W. Pratt of Huntsville, Ala., V.-P. and Treas. All are incorporators. E. M. Wilkins is Chief Engr., and M. S. Bingham, Consit. Engr. Route is from Florence, via St. Floraine, Bailey Springs, Killen, Center Star, Rogersville and Athens to Huntsville. Contract for construction and engineering is let to the Central Construction Co. of Indianapolis, Ind., E. M. Wilkins, Mgr. Rails and other supplies bought. Route is practically level, although there is some rough ground between Florence and Rogersville.

Fla., Melbourne.—C. T. Miller, Chief Engr., is reported making preliminary inspection of route for the projected electric railway from Melbourne to Tampa, about 115 mi.,

via Haines City, Lake Alfred, Winter Haven, Lucerne Park and other points.

Fla., Okeechobee.—Florida East Coast Railway is reported surveying for an extension from Okeechobee to Prairie, about 55 mi. E. Ben. Carter is Chief Engr. at St. Augustine, Fla. This is the reconnaissance previously noted. (See Manufacturers Record, June 28.)

Okla., Buffalo.—F. H. Peckham and Homer Wilkins of Oklahoma City will make survey for the Buffalo & Northwestern Railroad from Wayoka to Buffalo, Okla., 52 mi., for which construction contract has been let to R. Y. Walker of Fort Worth, Tex., representing the Taylor, Walker & Bell Construction Co. W. H. Temple is Prest.; E. C. Johnson, Vice-Prest.; C. A. Wyatt, Secy., all of Buffalo, and L. E. Walker of Wayoka, Okla., Gen. Mgr.

S. C., Spartanburg.—Southern Railway will build 1 mi. spur and 3½ mi. of switching and tracks and sidings in connection with U. S. Government cantonment at Fair Forest, N. C., Camp Wadsworth, near Spartanburg. Grading contract is let to H. C. McCrary of Knoxville, Tenn. S. D. Moses, Spartanburg is resident engineer.

Capital and Surplus  
\$4,000,000



Total Resources  
\$38,000,000

## The Largest National Bank in the South

Liberal Accommodations to Manufacturing Corporations  
**MERCHANTS-MECHANICS  
FIRST NATIONAL BANK  
OF BALTIMORE**

### The National Exchange Bank OF BALTIMORE, MD.

Hopkins Place, German and Liberty Sts.  
Capital \$1,500,000.  
March 30, 1915, Surplus and Profits,  
\$850,000.00.

OFFICERS:  
WALDO NEWCOMER, President.  
SUMMERFIELD BALDWIN, Vice-Pres.  
R. VINTON LANSDALE, Cashier.  
C. G. MORGAN, Asst. Cashier.  
Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

### Maryland Trust Company

BALTIMORE

Capital \$1,000,000

TRANSACTS A GENERAL TRUST AND  
BANKING BUSINESS

Correspondence and interviews  
invited

### The Palmetto National Bank OF COLUMBIA

CAPITAL \$500,000.00  
Surplus and Undivided Profits \$250,000.00  
COLUMBIA, S. C.

## BONDS

City, County, School, Road, Drainage, Water—bought and sold.

We purchase direct or from contractors.  
**THE HUGH RIDENOUR CO.  
COLUMBUS, OHIO**

Philadelphia Detroit Dallas New Orleans  
**Powell, Garard & Co.**  
39 South LaSalle St.  
Chicago

We buy Southern Municipal Bonds  
(County, City, School, Road and Drainage District.)

### JOHN NUVEEN & CO.

First National Bank Building, CHICAGO

We purchase SCHOOL, COUNTY and  
MUNICIPAL BONDS. Southern Municipal  
Bonds a Specialty.

Write us if you have bonds for sale.

### First National Bank

RICHMOND, VIRGINIA

Capital and Surplus - - - - \$3,000,000  
JNO. B. PURCELL, President.  
JNO. M. MILLER, JR., Vice-Pres.  
W. M. ADDISON, Cashier.

## WE BUY BONDS CITY, COUNTY, SCHOOL AND DISTRICT

Correspondence Invited from Officials and Contractors

**SIDNEY SPITZER & CO.**

New York Chicago Toledo  
Cincinnati Cincinnati Los Angeles

Southern Branch: BELL BUILDING, MONTGOMERY, ALA.

### We Buy Bonds

City, County, School and Road, from  
Municipalities and Contractors.

WRITE  
**THE PROVIDENT SAVINGS BANK  
& TRUST CO.**

CINCINNATI OHIO

### Incorporate Under DELAWARE LAWS

Complete information on application.  
Delaware Registration Trust Co.  
900 Market St. Wilmington, Del.  
J. Ernest Smith, President and General Counsel.  
Chas. V. Warner Smith, Vice-President.  
Harvey W. Davis, Secretary and Treasurer.  
Charles B. Bishop, Assistant Secretary.

### MUNICIPAL BONDS

City, County, Road and Drainage

Bought from Municipalities or from

CONTRACTORS

**WALTER E. ORTHWEIN**

Established 1898 229 N. 4th St., St. Louis, Mo.

### Municipal Bonds BOUGHT

from Contractors and Municipalities  
**STACY & BRAUN**

Second National Bank Bldg., TOLEDO, O.

### GUNIER & COMPANY

Buyers of School, Electric Light,  
Waterworks, Sewer, Levee, Drainage  
and Road

**BONDS**

**BANKERS TRUST BUILDING**

Little Rock Arkansas

### INVESTMENTS

Send for our list of  
**Stocks and Bonds**

**L. N. ROSENBAUM & COMPANY**

80 Wall St. New York

## WE BUY Municipal Bonds

ISSUED BY  
Counties, Cities, School Districts  
and Road Districts.

WRITE US  
**CUMMINGS, PRUDEN & CO.**

Second National Bank Building  
TOLEDO, OHIO

Ala., Tuscaloosa—(Pasturizing Plant and Slaughter-house).—5 per cent. 20-year bonds are reported voted. Address The Mayor.

Ark., Bridge Junction—(Levee).—\$400,000 of an authorized issue of \$1,500,000 of 5½ per cent. \$1000 denomination St. Francis Levee Dist. bonds have been purchased at \$401,000 and accrued interest by Russell E. Gardner, St. Louis, Mo.

Ark., De Vall's Bluff—(Road).—On August 6 the Board of Comms. of Road Improvement Dist. No. 3, Prairie County, will sell \$15,000 of 6 per cent. 20-year bonds. W. H. Wheeler is Pres., and T. O. Sparks, Secy. Board of Comms. of District.

Ark., Marion—(Levee).—\$400,000 of 5½ per cent. 20-year bonds St. Francis Levee Dist., Crittenden County, have been purchased at 100.25 and interest by Russell E. Gardner, St. Louis.

Ark., Pine Bluff—(Levee).—\$54,000 of 5 per cent. bonds Farrelly Lake Levee Dist. have

been purchased by M. Orthwein of St. Louis, Fla., Fort Pierce—(School).—Steps are being taken to hold an election to vote on \$12,000 of bonds Special Tax School Dist., Nos. 8 and 9, St. Lucie County. Address School Board.

Fla., Jacksonville—(Certificates).—On August 15, Comms. of Duval County will sell \$3500 of 6 per cent. certificates of indebtedness.

Fla., Key West—(Road).—Election is to be held Aug. 14 to vote on \$100,000 of Monroe County bonds. Address Chrmn. Board County Comms.

Fla., Milligan—(Road).—\$50,000 of Okaloosa Special Road and Bridge Dist., Okaloosa County, bonds are voted. Address County Comms.

Fla., Orlando—(School).—Sub-School Dist. No. 7, Orange County, has voted \$30,000 of bonds. Address School Board.

Fla., Tampa—(School).—\$2000 of 6 per cent. \$100 denomination bonds School Dist. No. 7, Hillsborough County, will soon be offered. Address J. E. Knight.

Ga., Alma—(Road, Courthouse, Jail).—Date has not been determined for opening bids for \$60,000 public-road improvement, \$30,000 courthouse and \$10,000 jail 5 per cent. 10-20-year bonds, dated July 1, 1917; denomination \$500. Address T. B. Taylor, Ordinary, Baker County. Chas. Striplin is Clerk.

Ga., Morven—(School).—\$10,000 of bonds are voted. Address School Board.

Ga., Savannah—(Water-works).—Election is to be held Oct. 9 (not Aug. 14) to vote on \$50,000 of 4½ per cent. 1-25-year \$50 denomination bonds. Address The Mayor.

Ga., Statesboro—(Paving, Light, Water).—Bids will be received until 5 P. M. July 20 for \$30,000 paving and \$30,000 electric-light and water 5 per cent. bonds, maturing \$500 of each issue every 5 years. L. W. Armstrong is City Clerk. Further particulars will be found in the advertising columns.

Ky., Ashland—(School).—\$60,000 of an issue of \$100,000 of 5 per cent. 1-20-year bonds have been purchased at par and interest by Well, Roth & Co., Cincinnati.

La., Edgard—(Road).—\$180,000 of St. John The Baptist Parish bonds have been purchased at par and accrued interest by the Ilibernia Bank & Trust Co., New Orleans.

La., Kenner—(Street).—\$25,000 of bonds have been authorized by the Town Council.

La., Shreveport—(School).—Bids will be received until 1.30 P. M. August 6 for \$30,000 of bonds school district No. 1. Address C. E. Byrd, Supt.

Md., Annapolis—(Certificates of Indebtedness).—Bids will be received until noon August 9 for \$500,000 of 4 per cent. \$1000 denomination certificates of indebtedness of the "War Loan of 1917." Dated August 15, 1917, and maturing 1918. Emerson C. Harrington is Gov.; Hugh A. McMullen, Comptroller of the Treasury, and John M. Dennis, State Treas.

Miss., Jackson—(Refunding School).—\$15,000 of 5 per cent. 20-year \$500 and \$1000 denomination bonds have been purchased at par, accrued interest and \$5 premium by Jackson State National Bank, Jackson.

Miss., Meridian—(School).—Bids will be received until 10 A. M. July 24 for \$10,000 of 5 per cent. \$1000 denomination bonds, dated June 1, 1917. W. H. White is City Clerk and Treas.

Miss., Pascagoula—(School).—Bids will be received until noon Aug. 1 for \$2000 of 6 per cent. bonds Wade School Dist., Jackson County. Fred Taylor is Clerk and W. P. Ramsay, Pres. Board of Jackson County Supvrs.

N. C., Benson—(Railroad).—Election will be held about Sept. 1 to vote on \$50,000 bonds for extension of the Central Carolina Railway from Lillington to Swannboro. Address The Mayor.

Mo., Benton—(Road).—Election is to be held in Scott County August 1 to vote on \$750,000 of bonds. Address County Comms.

Mo., Caruthersville—(School).—Bids will be received until July 27 by Secy. of School Board for \$50,000 of 5 per cent. bonds.

Mo., New Madrid—(Road).—Election is to be held in New Madrid County August 2 to vote on \$850,000 of bonds. Address County Comms.

Mo., Warrensburg—(Road).—Petitions are being circulated in Johnson County authorizing the County Court to call an election to vote on \$500,000 bonds. Address County Comms.

N. C., Clinton—(Street).—Bids will be received until noon August 15 by the Mayor and Town Comms. for \$29,000 of 5 per cent. street bonds, maturing \$1500 annually. H. A.



This bank offers a special service to Southern brokers, manufacturers, shippers and banks for the collection of drafts, particularly B/L drafts on Chicago and other Northern points. Please write us for particulars.

We also solicit correspondence and interviews with high-grade Southern concerns regarding a direct Chicago banking connection.

### UNION TRUST COMPANY CHICAGO

Capital and Surplus, \$3,000,000.00  
Deposits, \$34,000,000.00

Established 1869

### THE BANK OF ALABAMA

ENSLEY, ALABAMA

R. A. TERRELL - President  
J. W. MINOR - Vice-President  
FOSTER HAMILTON Cashier

We Solicit Your Business

Write us about Investments in Birmingham Real Estate.

### Jemison Real Estate & Insurance Co.

Real Estate  
General Insurance, Loans  
11 N. Twentieth St. BIRMINGHAM, ALA.

### D. H. BURGESS & CO.

Exporters Importers

P. O. Box 115 PETERSBURG, VA.

Write us your needs in all  
lines of business

FOR SALE Timber, Coal, Iron, Ranch  
and other Properties  
Southern States. West Indies, Mexico.

### GEO. B. EDWARDS

(Broker)  
Tribune Building NEW YORK, N. Y.  
Confidential Negotiation. Investigations.  
Settlements and Purchases of Property.

### CONTRACTORS AND MANUFACTURERS



We Make Them Promptly.

Headquarters for SEALS, STOCK CERTIFICATES, STENCILS,  
STEEL DIES, BRASS SIGNS, ENAMEL PLATES.

MEMORIAL PLATES, CHURCH SEALS and FEW PLATES.

Made on our Premises. Send for Catalogue.

**THE J. F. W. DORMAN COMPANY**  
BALTIMORE, MD.

## Bond Tests

There are nine questions that the conservative investor usually asks before purchasing a bond.

What these questions are and how they would be answered if a bond listed on the New York Stock Exchange were under consideration is covered by our Special Letter No. AG-11, which we shall be glad to send on request.

### A. B. Leach & Co.

Investment Securities

62 Cedar St., New York

Chicago, Boston, Buffalo, Minneapolis, Philadelphia, Baltimore, St. Louis



James is Clerk. Further particulars will be found in the advertising columns.

N. C., Greensboro—(Courthouse).—Bids will be received until 2.30 P. M. August 29 for \$250,000 of 5 per cent. \$1000 denomination Guilford County bonds, dated Sept. 1, 1917, and maturing 1922 to 1946. W. C. Boren is Chrmn. Board County Commrs.

N. C., Hendersonville—(Street).—City desires to sell street-paving bonds. Address W. M. Bacon, Member of City Council.

N. C., Kinston—(Improvement).—\$504,930 of 6 per cent. bonds have been purchased at \$55 premium by Frederick E. Nolting & Co., Richmond, Va., and Harris-Forbes & Co., New York.

N. C., Wilson—(School).—Steps are being taken to issue \$150,000 of bonds. Address School Board.

N. C., Wilmington—(Workhouse).—Bids will be received until August 22 for \$17,000 of 5 per cent. 20-year \$1000 denomination bonds to pay the indebtedness created by the construction of a workhouse in New Hanover County. Denominations, \$500 and \$1000. W. A. Williams is Clerk.

N. C., Winston-Salem—(School, Water).—Bids will be received until noon August 1 for \$50,000 of school and \$125,000 water 5 per cent. \$1000 denomination bonds, dated April 1, 1917, and maturing April 1, 1947. W. H. Holcomb is Secy. Board of Aldermen.

Okla., Ardmore—(Road, Bridge).—\$70,000 of Hewitt Township, Carter County, bonds have been purchased at \$70,750 by C. Edgar Bonhold. Clarence Harris is County Clerk.

Okla., Buffalo—(Water, Sewer, Light, etc.).—\$100,000 of bonds for water-works, sewers and electric lights have been voted and various townships in Harper County have voted \$100,000 for roads. Address The Mayor and the County Commrs., respectively.

Okla., Hugo—(County Fair).—Election is to be held in Hugo to vote on \$15,000 of bonds for Choctaw County fair. Address The Mayor.

Okla., Lawton—(Water-works).—Election was held July 23 to vote on \$375,000 of 1-25-year \$1000 denomination bonds, interest not exceeding 6 per cent. J. M. Haynes is Commr. of Finance.

Okla., Okmulgee—(Water, Sewer, etc.).—Election is to be held August 7 to vote on \$35,000 of water and sewer, \$30,000 garbage incinerator and \$30,000 fire station and apparatus bonds. Address The Mayor.

Okla., Rocky—(Water, Light).—\$15,000 of water-works and \$5000 electric-light bonds are voted. Address The Mayor.

Okla., Shamrock—(Water, City Hall, etc.).—Election is to be held Aug. 4 to vote on \$40,000 water-works, \$2500 city hall and jail and \$3500 fire-equipment bonds. Address The Mayor.

Okla., Stillwater—(Light, Water).—Bids received July 25 for \$6000 of 5 per cent. 10-year light and water bonds. J. E. Goodman is City Clerk.

S. C., Bonneau—(School).—School bonds have been purchased by the Carolina Bond & Mortgage Co.

S. C., Duncan—(School).—Carolina Bond & Mortgage Co., Columbia, S. C., has purchased school bonds.

S. C., Orangeburg—(School).—Bids will be received until noon July 28 for \$3000 of 5½ per cent. bonds West Orange School Dist. No. 27, Orangeburg County. Address W. V. Culler, Jr., Chrmn. Board of Trustees of Dist.

Tenn., Benton—(Water).—Bids will be received until noon August 15 by J. E. Cook, City Recorder, for \$10,000 of 6 per cent. 30-year bonds.

Tenn., Columbia—(Street).—Ordinances have been prepared authorizing the issuing of 5 per cent. 1-5-year bonds as follows: Series No. 8, \$11,250; Series No. 7, \$4250; Series No. 12, \$3000; Series No. 11, \$3000; Series No. 10, \$16,000; Series No. 9, \$12,000; J. M. Dedman is Mayor, and E. E. Erwin, Recorder.

Tenn., Greeneville—(Road).—Bids will be received until noon July 30 for \$510,000 of 5½ per cent. 20-year bonds. Address H. J. Wise-carver, Secy. Pike Commission of Greene County.

Tenn., Madisonville—(Road).—Bids will be received until 10 A. M. August 4 for \$175,000 of 5 per cent. Monroe County Road Improvement bonds, maturing 1942 to 1952. Joe J. Howard is Chrmn., and J. B. Pennington, Clerk Monroe County Court. Further particulars will be found in the advertising columns.

Tenn., Maryville—(Sewer).—Bids received 7 P. M. July 26 by J. L. Tweed, Town Recorder, for \$70,000 of 6 per cent. sewer bonds.

Tenn., Memphis—(School).—\$150,000 of 5 per cent. Bolton College bonds were purchased at \$1875 premium by the Manhattan Savings Bank of Memphis, and \$200,000 of 4½ per cent. school bonds at \$2440 premium by the Bank of Commerce & Trust Co. of Memphis.

Tenn., Nashville—(Municipal, Improvements).—Election to vote on \$1,750,000 of 5 per cent. 20-40-year \$1000 denomination bonds for municipal improvements will probably be held Sept. 25. Address The Mayor.

Tenn., Trezevant—(Water-works).—\$12,500 of bonds defeated.

Tex., Archer City—(Warrants).—All bids received July 9 for \$60,000 of 6 per cent. 20-year \$500 denomination Archer County road and bridge warrants were rejected. J. S. Melurgin is County Judge.

Tex., Austin—(School).—State Board of Education has purchased \$30,000 of bonds. Address School Board.

Tex., Austin—Bonds approved by Attorney-General: \$1500 of 5 per cent. 10-20-year Rusk County Common School Dist. No. 5; \$4000 of 5 per cent. Ellis County Common School Dist. No. 58; \$25,000 of 5 per cent. Kirbyville Independent School Dist.; \$500,000 of 5 per cent. 20-40-year Galveston County caseway.

Tex., Beaumont—(Fair Bonds).—Election is to be held Aug. 7 to vote on \$100,000 of bonds for home for South Texas State Fair. Address The Mayor.

Tex., Belton—(School).—Joe Lee Dist., Bell County, has voted \$3000 of bonds. Address County Commrs.

Tex., Belton—(School).—Election was held

## Municipal Bonds Purchased

Correspondence invited from investors wishing to sell their holdings of seasoned marketable Municipal Bonds, and from municipal officials and contractors in connection with entire new issues.

### THE NATIONAL CITY COMPANY

55 Wall Street, New York

PHILADELPHIA

BOSTON

## TOWNSEND SCOTT & SON

Bankers and Brokers

### New Capital for Established Enterprises

We are interested in the financing of sound industrial enterprises throughout the South. Loans made also to public utilities and municipalities

Established 1832

BALTIMORE, MD.

## Alabama Audit Co.

BANK, COMMERCIAL, MUNICIPAL ACCOUNTING  
1122-24 Bell Bldg., Montgomery, Ala.  
Van Antwerp Bldg., Mobile, Ala.

Twenty-Five Years' Experience

### AUDITORS ACCOUNTANTS COST ACCOUNTING

New York, Louisville, Augusta, St. Louis, Baltimore, Pittsburgh, Cincinnati, Richmond, Chicago, Milwaukee, Columbus, Grand Rapids, Detroit, and West Virginia References.

State Public Service Utility Audit and Investigating Co., Inc.

306-307 Kanawha National Bank

CHARLESTON, WEST VIRGINIA

## We Buy City, County School and Drainage BONDS

FROM MUNICIPALITIES OR CONTRACTORS

We are in position to pay HIGHEST PRICES

Write or wire us your offerings

THE NEW FIRST NATIONAL BANK @ Assets, \$8,000,000 COLUMBUS, O.

## WE BUY MUNICIPAL, COUNTY and DISTRICT BONDS

FROM OFFICIALS DIRECT OR FROM CONTRACTORS

And are Equipped by Experience to Furnish Proper Advice and Legal Proceedings

Write to Us

THE RUDOLPH KLEYBOLTE COMPANY

18 East Fourth Street

Established 1891

Cincinnati, Ohio

## To Manufacturers and Capitalists

Contemplating the Establishment of Industrial Enterprises

Attention is called to the exceptionally favorable location of

## NEWPORT NEWS, VA.

on Hampton Roads, fifteen miles from the sea, deep water, railway and sea transportation facilities unrivalled. Climate salubrious. Apply to

W. B. LIVEZEY, President

OLD DOMINION LAND COMPANY  
NEWPORT NEWS, VA.

## LOANS MADE TO STATES, CITIES, COUNTIES, ETC.

Also Entire Issues of Bonds Purchased

We prepare and certify as to the genuineness of MUNICIPAL BONDS

Largest Capital and Surplus of Any Financial Institution in Maryland or Any Southern State.

Established 1884

Resources \$21,000,000

MERCANTILE TRUST AND DEPOSIT COMPANY  
OF BALTIMORE

A. H. S. POST, President

F. G. BOYCE, Jr., Vice-President

B. A. BRENNAN, President

## THE CITIZENS COMPANY INCORPORATED

BALTIMORE

MARYLAND

Finances Corporations, Engages in Underwritings and Handles for its own account Complete Issues of Securities. Correspondence Solicited.

## COUNTY AND SCHOOL BONDS

The Mercantile Trust Company, Saint Louis, through its Bond Department, is always in the market for County and School Bonds. We have the facilities for handling whole issues of County, School or Municipal Bonds and all matters pertaining to them. We will be glad to hear from banks or investors who may wish to buy or sell high-grade bonds.

MERCANTILE TRUST COMPANY ST. LOUIS, MO.  
Capital and Surplus, \$9,500,000

W. L. SLAYTON & CO. TOLEDO, OHIO

DEALERS IN

CITY  
COUNTY  
TOWNSHIP

BONDS

ROAD  
SCHOOL  
DRAINAGE

If you want to Buy or Sell, write for Prices We solicit your patronage.

**You Mill Owners may not want more business now—but you will eventually!**

**Anticipate!** Let us represent you with our Sales Organization here and abroad.

**WE HAVE THE CUSTOMERS and WILL HAVE MORE RIGHT ALONG.**

## TIN PLATE IRON and STEEL and OTHER **MILLS**

*Machinery Houses, Manufacturers, etc., Interested in Export, Please Write Us Immediately.*

**A. J. COCCARO & COMPANY**

1 Broadway Established 1906 NEW YORK CITY

CHARLES L. HEHL, C. P. A., President JOHN KUCHLER, C. P. A., Vice-President  
ERNEST E. WOODEN, C. P. A., Sec. and Treas.

### BALTIMORE AUDIT COMPANY

901-903 Calvert Building

BALTIMORE, MD.

### York Safe and Lock Company MANUFACTURERS OF **SAFES and VAULTS** YORK, PA. BALTIMORE, MD.

### BARNES SAFE & VAULT CO.

ROBT. H. BARNES Prop.

Estimates furnished on Diebold Safes and Vaults. We have the largest stock of new and second-hand safes south of New York.

12 N. 12th Street

RICHMOND, VA.

## You Can Save Time and Money

just as we have. We bought a few **LOOSE-IP-LEAF** Post Binders to use as ledger transfers, but we found them so practical, so well made and so durable, that we are keeping most of our office records in them.

By using the **LOOSE-IP-LEAF** stock forms that fit these binders we have systematized many of our operations and have saved time and money. Here are some of the uses for which we can get stock forms.



Combined Cash and Journal  
Bank Statement  
Petty Cash  
Monthly Statements  
Sales Summary  
Column Sheets  
Cash Received  
Accounts Payable  
City Delivery Receipts

Purchase Order Record  
Receiving Slip  
Invoice Books  
Perpetual Inventory  
Order Register  
Bill and Charge Sheets (Dupl.)  
Check Record  
Bill Payable  
Pay Roll Record

**AT ALL FIRST CLASS STATIONERS**

**NOTE** **LOOSE-IP-LEAF** Books and Forms Are Acknowledged the Best by both Dealers and Users.  
**WHY SUBMIT TO SUBSTITUTION?**

Send for Catalog J-5

### Irving-Pitt Manufacturing Company

Largest Loose Leaf Manufacturers in the World

Kansas City, Missouri

July 23 to vote on \$1500 of bonds Bell Plains Dist., Bell County. Address County Commrs.

Tex., Canadian—(Road).—\$150,000 Hemp-hill County bonds defeated.

Tex., Cisco—(School).—\$10,000 of 5 per cent. bonds Cisco School Dist., Eastland County, are voted. Address School Board.

Tex., Dallas—(Road).—Election is to be held in Dallas County August 21 to vote on \$1,000,000 of bonds. Address County Commrs.

Tex., Franklin—(Warrants).—\$20,000 of road warrants of Robertson County are to be issued. Address County Commrs.

Tex., Goliad—(School).—Bids will be received by J. C. Calhoun, Prest. Board of Trustees, care of Runge National Bank, Runge, Tex., for \$10,000 of bonds Charco Independent School Dist., Goliad County.

Tex., Hamilton—(Street).—\$20,000 of bonds are voted. Address The Mayor.

Tex., Port Arthur—(School).—\$200,000 of bonds being balance of an issue of \$450,000 voted in 1916, have been purchased at par and accrued interest by Kaufman, Smith, Emmert Investment Co., St. Louis, Mo.

Tex., Pittsburg—(Road).—Election is to be held August 6 to vote on \$35,000 of 5 per cent. 20-30-year \$1000 denomination bonds Road Dist. No. 2, Camp County. C. Everett Bryson is County Judge, Camp County.

Tex., Port Lavaca—(Road).—Election is to be held Aug. 14 to vote on \$75,000 of bonds Road Dist. No. 2, Calhoun County. Address County Commrs.

Tex., Sinton—(School).—Dist. 12, San Patricio County, has voted \$20,000 of 5 per cent. 10-40-year \$500 denomination bonds. Address County Commrs.

Tex., Vega—(Road).—\$60,000 of 5 per cent. 40-year \$1000 denomination Oldham County road building and improvement bonds have

been purchased at 96½ by Blanton Banking Co., Houston, Tex.

Va., Bristol—(Street).—Bill has been introduced in the City Council authorizing sale of \$20,000 of bonds. Address The Mayor.

W. Va., Broad Oaks, P. O. Clarksburg—(Water-works).—Bids will be received until noon August 10 for \$4000 of 6 per cent. 10-30-year bonds, dated August 6, 1917. Joe N. Craddock is Mayor and C. J. Cottrill, Recorder.

W. Va., Carlisle—(Street, Fire Equipment, etc.).—Election is to be held in November to vote on bonds as follows: Floating indebtedness, \$60,000; fire-department equipment, \$10,000; street paving, \$50,000. Address The Mayor.

W. Va., Edgewood, P. O. Wheeling—(Street).—\$54,000 of 6 per cent. \$500 denomination bonds are voted. C. M. Criswell is Mayor, and Geo. E. Carenbauer, Recorder.

W. Va., Smithfield—(School).—Election is to be held, it is stated, to vote on \$20,000 of bonds. Address School Board.

### FINANCIAL NOTES

The National Bank of Commerce, New York, has issued a handsomely prepared booklet of about 50 pages descriptive of the institution, including its history. The ground on which the bank building stands at the corner of Nassau and Cedar Sts. was once owned by Aaron Burr, and a facsimile of the deed which he and his wife executed when conveying the property to a purchaser is presented in the book. There are numerous other illustrations and the reading matter abounds in valuable and interesting facts concerning banking operations.

### THE SELWYN HOTEL, Charlotte, N. C.

EUROPEAN PLAN, \$1.50 and UP

Fireproof. Modern and Magnificently Furnished. 150 Rooms, 75 with Private Bath. Large Sample Rooms. Under New Management. Most Desirable Location. Long Distance Phone in Each Room. Caters Especially to the Tourist and Commercial Traveler.

SELWYN HOTEL CO.

R. W. FARR, Manager

### VIRGINIA POLYTECHNIC INSTITUTE and AGRICULTURAL AND MECHANICAL COLLEGE Blacksburg, Virginia

Fifteen degree courses in Agriculture, Engineering, General Science and Applied Science, Two-Year Course in Agriculture and Farmers' Winter Course.  
Apply to Registrar for catalogue  
J. D. EGGLESTON, President

### CONVERSE COLLEGE

SPARTANBURG, S. C.

is one of the only six women's colleges in the South honored by membership as a standard college in "The Association of Colleges and Preparatory Schools of the Southern States." Its B.A. degree is accepted by the highest grade Colleges and Universities, and admits, without further work, to candidacy for the M.A. degree. It has separate science, music and library buildings; dormitories limited to 190; gymnasium and infirmary; 42-acre campus, and 38 teachers and officers. It is 35 miles from the Blue Ridge Mountains, and has an ideal winter climate. It owes no debts, and has an endowment. It is accessible North, East, South and West by six lines of railway. If you wish a catalogue, address

ROBT. P. PELL, Litt. D., President Spartanburg, S. C.

### Keep Away the Prowlers

These are the days when you must keep all suspicious characters away from your plant. Be sure your watchman makes his rounds at regular intervals for your protection.

Your country may need your plant at any time. It is your patriotic duty to see that it is protected.

### ECO CLOCK CO.

197 Congress Street BOSTON, U. S. A.

ESTABLISHED 35 YEARS

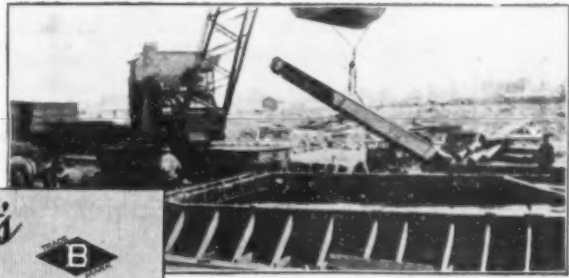


Protection Always



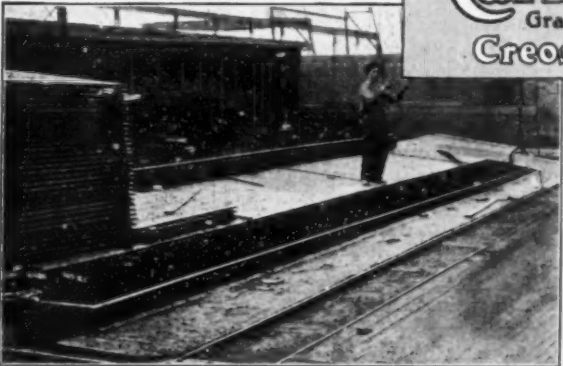


Permanent plant erected by copper mining company; constructed of steel consisting of two tanks, one for "hot bath" and the other for "cold bath." Used for creosoting timber and lumber used in surface-structures and mills.

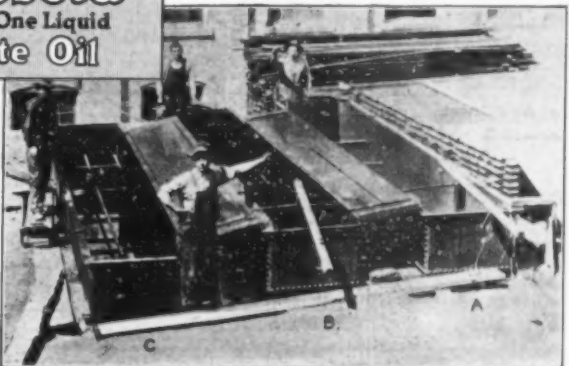


Temporary treating-plant constructed of wood and lined with galvanized sheet iron. Used for creosoting over 250,000 feet B. M. of timber for floor-framing of industrial plant.

**Barrett's**  
**Carbosota**  
Grade-One Liquid  
Creosote Oil



Permanent plant for creosoting of refrigerator-car sills and roof-boards.



Permanent portable plant built by large paper-mill for creosoting roof-boards and miscellaneous lumber. (A) Tank for hot treatment. (B) Tank for cold treatment. (C) Tank for catching drippings.

## A Group of Open-Tank System Creosoting-Plants

**S**IMPLICITY, economy and efficiency are the principal features of the Open-Tank system, properly used.

The wide variety of equipment shown in the illustrations herewith indicates the ease with which creosoting by this method may be arranged to meet practically any condition where pressure-treated lumber is not required or available at economical cost.

The Open-Tank system consists of hot and cold treatment in refined coal-tar creosote oil, and is recommended for all structural wood exposed to

decay which will not be subjected to severe mechanical abrasion when in service.

**CARBOSOTA CREOSOTE OIL** is the *standard* for non-pressure treatments. Specify it and insure satisfactory results.

(NOTE: It is necessary that all wood to be treated by a non-pressure process shall be seasoned until air-dry.)

Booklet regarding the CARBOSOTA treatment free on request.

The **Barrett** Company

New York	Chicago	Philadelphia	Boston	St. Louis
Cleveland	Cincinnati	Pittsburgh	Detroit	Birmingham
Kansas City	Minneapolis	Salt Lake City	Seattle	Peoria

THE PATERSON MANUFACTURING COMPANY, Limited: Montreal  
Toronto Winnipeg Vancouver St. John, N. B. Halifax, N. S. Sydney, N. S.



Permanent plant erected by large iron mining company consisting of two steel treating-tanks and one 10,000-gallon storage-tank. Used for creosoting miscellaneous timber and lumber.



Temporary plant constructed of wood lined with galvanized sheet iron, equipped with steam-pipes for heating creosote. Used for creosoting roof-timber and -boards for roof over machine-room of paper-mill.



Modern Open-Tank Pole-Treating Plant. (Photo. courtesy Lindsay Bros. Co., Minneapolis.)

# DIRECTORY

## ARCHITECTS      ENGINEERS      CONTRACTORS

Detailed classification of specialized work undertaken by those  
having cards in this Directory will be found in Classified Index.

### MILBURN, HEISTER & CO.

Architects

WASHINGTON, D. C.

### THE ARNOLD COMPANY

Engineers—Constructors  
Electrical—Civil—Mechanical

105 South La Salle St. CHICAGO  
111 Broadway NEW YORK

### WINTERS & DOVE

Civil and Hydraulic Engineers

Water Works, Water Filtration, Sewers, Sewage  
Disposal, Pavements and Roads.  
Surveys, Plans, Specifications, Estimates, Reports  
and Appraisals.

311-312 Merchants Nat'l Bank Bldg.  
FORT SMITH, ARK.

### DOW & SMITH

Chemical Engineers Consulting Paving Engineers

A. W. Dow, Ph.B. F. P. Smith, Ph.B.

Mem. Am. Inst. Ch. Engrs.

Mem. Am. Soc. Civ. Engrs.

Asphalt, Bitumens, Paving, Hydraulic Cement,  
Engineering Materials  
131-3 E. 23d Street NEW YORK

Government Landscape Architect—1910-1916.

### GEORGE BURNAP Landscape Architect

Washington, D. C.

PARKS SUBDIVISIONS ESTATES

### DAY & ZIMMERMAN, Inc.

Engineers.

Layout, Design, Construction.  
Industrial Plants, Public Service Properties  
Examinations, Reports and Valuations.  
Operation of Public Service Properties.  
611 Chestnut Street PHILADELPHIA

J. M. CLARK, Mem. A. I. M. E.  
C. E. KREBS, Mem. A. I. M. E.  
G. R. KREBS J. W. MORGAN

### CLARK & KREBS

Civil and Mining Engineers and Geologists

Coal, Oil and Gas

Railroad and Municipal Engineering

CHARLESTON, W. VA.

### GILBERT C. WHITE, C. E.

M. Am. Soc. C. E.

M. Am. W. W. Assoc.

Consulting Engineer

Water Works Streets

DURHAM, N. C.

### WILLIAM A. STANTON

Architect and Structural Engineer

All Classes of Concrete and Steel Construction

308 First Nat. Bank Bldg.

VICKSBURG, MISS.

### HUGH L. COOPER & CO.

General Hydraulic Engineering

Including the Design, Financing, Construction  
and Management of Hydro-Electric  
Power Plants.

101 Park Avenue NEW YORK

### W. E. MOORE & COMPANY

Engineers

Reports, Designs, Supervision, Public  
Service Properties, Power Developments,  
Distribution and Application.

Union Bank Building PITTSBURGH, PA.

### WILLIAM SPEED

Civil Engineer and Landscape Architect

Chief Engineer Louisville-Nashville  
Division Dixie Highway.

Starks Building LOUISVILLE, KY

### L. A. GUERINGER

M. Am. Soc. C. E.

Civil Engineer

VICTORIA, TEXAS

### MORRIS KNOWLES

M. Am. Soc. C. E. Mem. Am. Soc. M. E.

Hydraulic and Sanitary Engineer

Investigations and Valuations for Purchase  
or Financing Water and Sewer  
Systems, Water Power, Drainage and  
Irrigation Systems.

1200 D. F. Jones Law Bldg. PITTSBURGH, PA.

W. M. GARDNER, Mem. Am. Soc. C. E. H. N. HOWE,  
Assoc. Mem. A. M. Soc. C. E.

### GARDNER & HOWE

Engineers

Designs, Estimates and Supervision;  
Concrete Bridges, Viaducts, Buildings,  
and other Structures.

Porter Building MEMPHIS, TENN.

### EDWIN WORTHAM, E. E.

Consulting Engineer

Industrial Plants, Factories, Municipal Work  
of all kinds, Steam and Electric Railways,  
Public Utilities, Reports, Valuations, Supervision,  
Franchises Drawn, Properties Operated

Suite 47, Allison Bldg. RICHMOND, VA

Mem. Am. Soc. M. E. Mem. Am. Soc. C. E.  
Mem. Am. Water-Works Assn.  
Roads, Pavements, Municipal Works, Reports,  
Interurban Bldg. DALLAS, TEXAS

### HENRY EXALL ELROD

Mem. Am. Soc. M. E. Mem. Am. Soc. C. E.

Mem. Am. Water-Works Assn.

Roads, Pavements, Municipal Works, Reports,  
Interurban Bldg. DALLAS, TEXAS

### DANIEL B. LUTEN

Designing and Consulting Engineer

Reinforced Concrete Bridges exclusively.

Associate Engineers in each State.

INDIANAPOLIS, IND.

### MARTIN J. LIDE

Consulting and Constructing Electrical  
and Mechanical Engineer

BIRMINGHAM, ALA.

### C. L. BROOKS ENGINEERING CO.

Packing-House and Cold-Storage Engineers.

We help you raise the capital, build the  
plant and run it successfully. We make  
a specialty of Southern plants.

Main Office—MOULTREE, GA.

MINNEAPOLIS, MINN. ATLANTA, GA.  
736 Plymouth Bldg. 711 Empire Bldg.

### WALTER G. FRANZ

Mem. A. S. M. E. Assoc. A. I. E. E.

Consulting Engineer

Designing and Superintending of Mechanical,  
Electrical and Sanitary Work.

Union Trust Bldg. CINCINNATI, OHIO

### WILLIAM C. SPIKER, C. E.

Mem. Am. Soc. Civ. Engrs.

Consulting Engineer

Reinforced Concrete and Structural Steel  
Buildings and Bridges.

1408-9 Candler Bldg. ATLANTA, GA.

### WILLARD, BOGGS & CO.

General Contractors

Water Power Development, Railroad Construction,  
Buildings.

SPARTANBURG, S. C.

### BLODGETT CONSTRUCTION COMPANY

Contracting Engineers

Steel, Wooden and Concrete Bridges, Pneumatic and Open Sinking  
Railroad Construction and Steam Shovel Work

KANSAS CITY, MO. SHREVEPORT, LA. MONTGOMERY, ALA.

### C. W. HUMPHREY

Consulting Engineer

Designing—Financing—Construction—  
Operation.

Electric Lighting, Power, Railway, Transmission,  
Hydro-Electric and Industrial Properties.

327 South La Salle Street CHICAGO

### L. SCOTT TWOGOOD

Civil and Sanitary Engineer.

Steel and Reinforced Concrete Structures, Buildings,  
Bridges, Industrial Plants, Viaducts.  
Water Supply, Water Purification, Sewerage Systems,  
Sewage Disposal, Municipal Improvements.

1514-15 Bank of Commerce Bldg. MEMPHIS, TENN.

### HUNT ENGINEERING CO.

Designing, Constructing and Operating Engineers and Contractors

Experts in Portland Cement Engineering

Examinations and Reports Made

513-517 Republic Building KANSAS CITY, MO.

### CHARLES T. MAIN

Member A. S. M. E.

Textile Mills

WATER POWER DEVELOPMENTS

201 Devonshire Street BOSTON

### WADDELL & SON

Consulting Engineers

Reinforced Concrete and Steel Bridges,  
Elevated Railways, Difficult Foundations,  
Advisory Services and Appraisals.

Suite 500-165 Broadway, New York

MAIN OFFICE, KANSAS CITY, MO.

### ALLEN-SCALES ENGINEERING COMPANY

INCORPORATED

Engineers and Contractors

Water Works Power Plants

209 Church Street Heating and Ventilation NASHVILLE, TENN.

Structural Consulting Engineer Industrial  
Est. March, 1910  
739 Randolph Bldg. MEMPHIS, TENN.

### C. E. SHEARER

Consulting Engineer

Est. March, 1910

739 Randolph Bldg. MEMPHIS, TENN.

### S. CHESTER MARKLEY

Consulting Sanitary Engineer

Water Works, Sewers, Investigations of Epidemics.

ROANOKE VIRGINIA

### F. ERNEST BRACKETT

Civil and Mining Engineer

Coal Mines, Water Works, Sewerage,  
Industrial Plants, Surveys and Reports.

Clark-Kesting Bldg. CUMBERLAND, MD.

### HEDRICK & HEDRICK

Consulting Engineers

Bridges, Viaducts and other Structures of  
Steel and Reinforced Concrete.

Interstate Building KANSAS CITY, MO.

### FREELAND-KLYCE ENG'G CO.

Consulting Engineers

Concrete and Steel Structures

NASHVILLE, TENN.

### Architects      Engineers Contractors

Your card on these pages  
will place you directly before  
the active forces of  
the South and Southwest.

### THE S. R. SMYTHE COMPANY

Engineers

PITTSBURGH, PA.

Contractors

Steel Works, Rolling Mills, Blast Furnaces, Hot Blast Stoves, Furnaces for All  
Purposes, Operated with Producer Gas, Natural Gas, Oil or Pulverized Coal.  
Coke Ovens, Gas Producers, Hand Operated or Mechanical.

The Valve of the Era. SCHILD SLIDING GAS AND AIR REVERSING VALVES.



# DIRECTORY

## ARCHITECTS

## ENGINEERS

## CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

### Ford, Bacon & Davis, Engineers.

115 Broadway, New York

New Orleans

San Francisco

### J. E. SIRRINE

Mill Architect and Engineer

SPECIALTY:

Textile Mills and Water Power Developments

GREENVILLE, S. C.

### SCOFIELD ENGINEERING COMPANY

Consulting, Designing and Supervising Engineers

TEXTILE—MECHANICAL—ELECTRICAL—CIVIL

Commercial Trust Building

PHILADELPHIA

### TUCKER & LAXTON

Contracting Engineers

Filters, Concrete Work, Hydro-Electric and Steam Electric Construction

CHARLOTTE, NORTH CAROLINA

### ARTHUR G. McKEE & CO.

Engineers and Contractors

Power Plants, Industrial Buildings, Metallurgical Plants, Blast Furnaces,  
Storage Bins, Coal-Handling Equipment.

Design—Construction

CLEVELAND, OHIO.

### HOWARD M. GASSMAN

Mem. Am. Soc. M. E.

Consulting Engineer

Mem. Am. Inst. E. E.

EQUIPPING MILLS AND MINES WITH POWER.  
REPORTS ON AND DESIGNING OF MANUFACTURING AND  
POWER PLANTS.

Brown-Marx Building

BIRMINGHAM, ALABAMA.



### SPRAY ENGINEERING COMPANY

Engineers

Manufacturers

For Spray Cooling Ponds, Irrigation  
Systems, Aerating Reservoirs, Odor  
Condensers, Gas Washers.

Of Air Washers, Spray Nozzles,  
Aerating Nozzles, Asphalt Nozzles,  
Park Sprinklers.

93 Federal Street

BOSTON, MASS.

### FRANCIS R. WELLER, M. Am. Soc. C. E.

Consulting Engineer

Hydro-Electric and Steam Power Plants, Reports, Appraisals, Designs,  
Construction, Properties Operated

Hibbs Building.

WASHINGTON, D. C.

### R. K. STEWART & SON

General Contractors

Concrete Construction, Waterworks, Buildings.

SOUTH BOSTON, VA.

### ARCHITECTS

### ENGINEERS

Your card on these pages will place you directly before the  
active forces of the South and Southwest.

### THE WEST CONSTRUCTION CO.

Street Paving Contractors

CHATTANOOGA, TENN.



### STONE & WEBSTER

Industrial Plants and Buildings, Steam Power Stations, Water Power Developments,  
Transmission Lines, Gas Plants, Electric and Steam Railroad Work, Substations.

NEW YORK

BOSTON

CHICAGO

### THE J. G. WHITE COMPANIES

Engineers—Contractors—Financiers—Managers

43 EXCHANGE PLACE, NEW YORK

London

Chicago



### GRAVES ENGINEERING CO., Inc.

Engineers and Operators

Industrial Properties and Public Utilities

25 Pine Street

NEW YORK

### SAVANNAH ENGINEERING AND CONSTRUCTION CO.

SAVANNAH, GEORGIA

Engineers and Constructors

### H. M. BYLLESBY & COMPANY

Engineers and Managers

Purchase, Finance, Design, Construct and Operate Electric Light, Gas,  
Street Railway and Water Power Properties. Utility Securities Bought  
and Sold. Examinations and Reports.

NEW YORK  
Trinity Bldg.

CHICAGO  
Continental & Commercial Bank Bldg.

TACOMA  
WASHINGTON

### HENRY J. COX AND COMPANY

Assoc. Mem. Am. Soc. C. E.

Engineers and Contractors

Railroads, Highways, Drainage and Levees

ALEXANDRIA

LOUISIANA

### SANDERSON & PORTER

Engineers

CHICAGO

NEW YORK

SAN FRANCISCO

72 West Adams St.

52 William Street

Nevada Bank Bldg.

### THE J. B. McCRARY COMPANY

Engineers

ATLANTA, GEORGIA

### MUNICIPAL IMPROVEMENTS

Southern work only. Have built over half of the Water, Light and Sewer  
Systems in Georgia and Alabama. We Design—Finance—Superintend.  
Bonds Purchased.

## — DIRECTORY —

### CHEMISTS                      GEOLOGISTS CHEMICAL ENGINEERS TESTING LABORATORIES

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

#### SAMUEL P. SADTLER & SON

*Consulting and Research Chemists.*  
Analyses and Reports made in all Branches of Industrial Chemistry. Raw Materials and Waste Products studied and reported upon. Experimental work.  
Office and Laboratory, 210 S. 13th Street; Experimental Laboratory, Chestnut Hill,  
PHILADELPHIA, PA.

L. T. Emory, C. E.      R. H. Eisenbrey, Chem. E.

#### EMORY & EISENBREY

*Civil, Chemical and Industrial Engineers*  
Designs of Industrial Plants. Modernizing, Investigations and Reports on Manufacturing and Mining Propositions. Specialists on Feldspar, Talc, Silica, Kaolin, Bauxite, and similar minerals.  
PHILADELPHIA,      PENNSYLVANIA

#### FROEHLING & ROBERTSON

*Richmond Testing Laboratory  
Chemists and Economic Geologists*  
Analyses of all kinds. Waters and fertilizers specialties. Standard Cement Testing Examinations and reports on mineral properties.  
813 East Franklin St.      RICHMOND, VA.

#### THE PICARD LABORATORIES

*Analytical and Consulting Chemist*  
Industrial Problems. Municipal Sanitary Work and Testing of Municipal Supplies. Analysis of Foods, Cottonseed Products, Fertilizers, Minerals, Fuel and Water—Chemical and Bacteriological.  
1911 First Avenue      BIRMINGHAM, ALA.

#### WILEY & COMPANY

*Analytical and Consulting Chemists*  
Experts on Fertilizer Materials, Coal, Greases, Foods, Drugs, Dairy Products, Chemical and Bacteriological Examination of Water for Domestic and Manufacturing Purposes.  
7 S. Gay Street      BALTIMORE, MD.

#### LUDWIG A. THIELE, Ph.D.

*Chemical Engineer*  
Mem. Am. I. Ch. E.  
Design and Construction of Chemical Plants, Sulfuric Acid Plants (Multiple-tangent System), Fertilizer Plants, Extraction Plants (volatile solvents), Supervision, Investigation of Plants, Processes and Propositions.  
Hartman Bldg.      COLUMBUS, OHIO

**Chemists                      Chemical Engineers**  
Your card in this department will constantly remind prospective clients of the special services you render.

#### RICHARD K. MEADE

Mem. A. M. S. M. E.      Mem. Am. I. Ch. E.  
*Chemical, Mechanical and Industrial Engineer*  
Chemical, Cement, Lime and Fertilizer Plants Designed and Improved. Reports on Industrial Propositions. Technical Research. Analyses, Tests and Inspection of Engineering Materials.  
Law Building      BALTIMORE, MD.

#### BURGESS & LONG

*Chemical Engineers & Analytical Chemists.*  
General Chemical Analyses.  
Recovery and Disposal of Manufactural Wastes and By-Products.  
Technical Control of Manufacturing Industries.  
Consultations as to Processes, Products, etc.  
8 E. Long Street      COLUMBUS, OHIO

#### PITTSBURGH TESTING LABORATORY

*General Inspection*  
Specialties—Cement and Road Materials, Cast Iron Pipe, Chemical and Physical Tests.  
CINCINNATI      BIRMINGHAM      DALLAS  
CHICAGO      PITTSBURGH      NEW YORK

#### ROBERT W. HUNT & CO.

*Engineers*  
INSPECTION AND TESTS. Steel and Cement for Bridges and Buildings. Railroad Material and Equipment. Chemical, Physical and Cement Laboratories.  
Chicago      New York      Pittsburgh      St. Louis  
Dallas      New Orleans      Los Angeles      San Francisco

#### MINES EFFICIENCY CO.

*Geological, Mining and Metallurgical Engineering.*  
Examination and Exploration of Mineral Properties. Design and Erection of Concentration Plants. Manganeses and Iron Ore Problems a Specialty.  
709 Alworth Bldg.      DULUTH, MINN.  
120 Broadway      NEW YORK CITY

#### THE DORR COMPANY

*Metallurgical and Industrial Engineers*  
Research, consultation and design of plants in connection with Chemical and Hydrometallurgical processes, prevention of stream pollution, trade waste treatment, etc.  
17 Battery Place      DENVER      NEW YORK      LONDON

#### GEORGE C. DAVIS

*Analytical and Consulting Chemist*  
Analyses of Iron, Steel, Ores, Alloys, Coal, Sand, Clay and Cement.  
39 South Tenth St.      PHILADELPHIA, PA.

FOUNDED 1910  
**THE INSTITUTE OF INDUSTRIAL RESEARCH**  
(INCORPORATED)  
Chemical and Engineering Laboratories  
*Consulting Chemists and Chemical Engineers*  
Plant Design and Construction  
WASHINGTON, D. C.

**A. H. NEY, Inc.**  
*Consulting Chemists and Engineers*  
Experts in Coal Tar Products  
50 Church Street      NEW YORK

**ARTHUR D. LITTLE, Inc.**  
ESTABLISHED 1886  
The oldest, largest and best equipped organization of Chemists and Engineers in the country for the investigation of conditions affecting the efficiency and economy of industrial operations.  
93 Broad Street      BOSTON



We test foundations for buildings, bridges and dams. We prospect coal and mineral lands in any part of North and South America.  
**WE LOOK INTO THE EARTH**  
By use of Diamond Core Drills  
**PENNSYLVANIA DRILLING COMPANY**  
2823 Whitehall Bldg., New York.      30 Carson St., Pittsburgh, Pa.  
Phone Rector 6698      Phone Hemlock 305.

## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

#### New Foundry Soon in Use.

The Bound Brook Oil-Less Bearing Company, Bound Brook, N. J., announces that the foundry which is being erected at Plant No. 2, Lincoln, N. J., two miles east of the Bound Brook plant, will be ready for occupancy on the specified date, August 3. This building is of steel and brick construction, 150 feet long and 60 feet wide. It will materially increase production of this company's fast-growing output.

#### New Officers Elected.

The Lodge & Shipley Machine Tool Co., Cincinnati, Ohio, announces that its new officers are as follows: M. G. Lodge, president; J. W. Carrel, vice-president and general manager; L. A. Hall, secretary and treasurer. The policy and the organization of the company will be the same as heretofore. As recently published, Murray Shipley has sold his entire interest in the company and severed his connection with it.

#### Important Mill Contracts.

The Burrell Engineering & Construction Co. of Chicago, has been awarded a contract for the erection of a new combination mill and warehouse building for the Wichita Mill & Elevator Co., Wichita Falls, Tex., and the mill machinery will be purchased from the Nordyke & Marmon Company, Indianapolis, Ind. The milling company is buying a new unit of 1000 barrels capacity, and it will move its present unit of equal capacity to the new building as soon as the structure is completed. The new mill building will be of reinforced concrete 321 by 54 feet in dimensions. The machinery end will be 8 stories high, and the warehouse end 5 stories.

#### Change in Advertising Staff.

Wm. A. Hart, formerly in the advertising department of the Burroughs Adding Machine Co., has joined the advertising staff of the Detroit Steel Products Co. as assistant advertising manager. He has lived in San Francisco for the past year, being Western advertising manager for the Burroughs Co., and his experience there, which included considerable traveling over much of the West, will be valuable to him in his new position while presenting to customers the advantages of Fenestra solid steel windows.

#### Analysis of Asphalt Compositions.

The Fort Worth Laboratories, 204½ Houston St., Fort Worth, Tex., announces that it has just installed a large Rotarex machine capable of determining the proportion of asphalt in a two-pound sample of asphalt pavement, or in the mixture before laying. After the removal of the asphalt an accurate determination of the grading of the mineral aggregate is possible. It is further stated that the determinations made by using this machine more nearly represent the actual composition of pavement than if a small sample is used, owing to the varied nature of mixtures. City and county engineers, as well as paving contractors, will doubtless avail themselves of this opportunity to have such work done.

#### Obliged to Find Larger Quarters.

The Calebaugh Self-Lubricating Carbon Co., Philadelphia, Pa., announces that owing to the great increase in its business the plant, after August 1, will be located at 1508-18 Columbia Ave., but the offices will remain at 1503 Columbia Ave. This move is necessary to secure better facilities to manufacture No-Spark carbon brushes for use on generators and motors. The business was begun in a small way, but the product has met with such appreciation and demand that the company has outgrown its present capacity and was compelled to find larger quarters. It has sales representatives in all

parts of the country, the South being covered mainly by the Baltimore Electric Supply Co., although in the Eastern part of Maryland and the District of Columbia, Chas. A. Fine represents the business, and at Birmingham, Ala., the Moore-Handley Hardware Co. looks out for the trade there.

## TRADE-LITERATURE

#### A Valuable Handbook.

"Hoisting Machinery for Industrial Works," a handbook issued by the Shepard Electric Crane & Hoist Co., Montour Falls, New York, has just come off the press and is ready for distribution. It describes, and illustrates with numerous cuts, many hoists for a variety of purposes and valuable data as to dimensions, capacities, etc., is presented. The pictures are especially clear and enlightening. In addition to a discount sheet, the book also contains full instructions as to quotations and orders.

#### Double-Deck Concrete Wharf-House.

The double-deck wharf-house at Pier 4 of the Galveston Wharf Co., Galveston, Tex., the construction of which was designed and supervised by Ford, Bacon & Davis, engineers, New York, San Francisco and New Orleans, is described with excellent pictures in the June issue of "Recent Construction Work," issued by that firm. It says that this structure is the first double-deck reinforced concrete wharf-house to be built in the South. It has cotton storage facilities of 60,000 bales and has increased the cotton-handling capacity of the port of Galveston by about 250,000 bales a year. Vessels of 30 feet draft can be taken at mean low water from the deep water in the Gulf of Mexico to the wharf-house, where water and rail transportation meet. The illustrations are fine.

#### Hydro-Electric and Steam Power Plants.

Viele, Blackwell & Buck, consulting engineers and constructors, 49 Wall St., New York city, have issued a handsome book illustrating some of their engineering and construction work, including hydro-electric and steam power plants in various parts of the United States, Canada and Mexico. The company has had a broad experience of many years, during which it has built up an organization thoroughly equipped for designing and supervising all such contracts, besides the purchasing of required materials and machinery upon an economical basis. The illustrations in this publication are made from photographs and are in the highest plane of the half-tone art. They are printed on highly calendered paper and display minute details of the several places illustrated. They include power-houses, dams, tunnels, penstocks, transmission lines, etc.

#### P. F. T. Sewage Ejectors.

A large number of inquiries received from industrial plants for sewage-lifting equipment has caused the Pacific Flush Tank Co., Singer Building, New York, and 424 Ravenswood Ave., Chicago, to issue Circular 18 relating to the "P. F. T. Sewage Ejector for Industrial Plants." It says that these ejectors are particularly adaptable for pumping sewage either into a sewer at a higher level or to a point of disposal. They are placed in a pit or sump, at a point where all drains may be collected, and they automatically eject the sewage as fast as the ejectors are filled. All that is necessary is to supply compressed air in sufficient volume and pressure to raise the desired amount of sewage to the necessary height. If compressed air is not available at any plant a simple steam or electric compressor can be installed to furnish the air. A full description of the ejectors is given.



# EST

build-  
or the  
thwest,  
or sub-  
readers  
ons, as  
ed just

being cor-  
electric sup-  
rn part of  
Columbia,  
siness, and  
ore-Handley  
rade there.

## EE

Industrial  
the Shepard  
four Falls,  
press and  
cribes, and  
many holts  
uable data  
e., is pre-  
lally clear  
a discount  
all instruc-

### -House.

at Pier 41  
Galveston,  
h was de-  
Bacon &  
Francisco  
with ex-  
ne of "Re-  
d by that  
ure is the  
rete wharf.  
It has cot-  
bales and  
g capacity  
out 250,000  
draft cal-  
n the deep  
the wharf-  
s-transportation

### er Plants.

ulting en-  
ll St., New  
some bank  
eering and  
ro-electric  
ious parts  
nd Mexico.  
experience  
has built  
equipped  
such can-  
f required  
an ex-  
us in this  
otograph  
the half-  
highly cal-  
ute details  
They in-  
nels, pen-

### s.

elved from  
ing equip-  
lush Tank  
, and 426  
ue Circular  
ge Ejector  
that these  
otable for  
ewer at a  
osal. They  
at a point  
, and they  
as fast as  
necessary  
sufficient  
he desired  
ary height.  
ble at any  
compressor  
ir. A full  
n.